

THE
UNIVERSITY of MARYLAND
BULLETIN



Summer School

1965

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University of Maryland. The University reserves the right to change any provision or requirement at any time within the student's term of residence. The University further reserves the right, at any time, to ask a student to withdraw when it considers such action to be in the best interests of the University.

SUMMER SCHOOL

1965

THE UNIVERSITY OF MARYLAND

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ADMISSION:

1. Students who were registered with the University during the preceding semester need only to appear for registration at the time indicated on page iii.
2. All *new undergraduate* and *special* students must file an application with the Admissions office by June 1, 1965 and must have been admitted to the University before registering for classes.
3. All *new graduate* students must file an application and all supporting records with the office of the Dean of the Graduate School by June 1, 1965 and must have been admitted to the University before registering for classes.

REGISTRATION:

College of Education only:

1. Begin at south-west door of Armory and only according to the alphabetical schedule posted on page iii of this catalog.
2. Schedule cards must be signed by the student's adviser and the Dean of College of Education.
3. Graduate students must have schedule cards, signed by adviser, Dean of the College of Education, and the Dean of the Graduate School.

All Other Colleges:

1. Begin at the respective college office.
2. Schedule cards must be signed by the student's adviser and dean.
3. Graduate students must have the signature of the Dean of the Graduate School.
4. Complete registration at the Armory.

Registration is Neither Complete Nor Official Until All Forms Are Submitted and Fees Are Paid.

Registration Schedule

SUMMER SCHOOL 1965

Monday and Tuesday, June 21 and 22, 1965

To expedite registration, students have been grouped on the basis of the first letter of the last name. No student will be permitted into the Armory until the appropriate time, as listed below:

Monday, June 21, 1965

8:30	BM-BT	11:10	GRM-HD
8:55	BU-CH	11:30	HE-HR
9:15	CI-CO	1:00	HS-J
9:40	CP-DN	1:25	KA-KR
10:00	DO-EZ	1:45	KS-LI
10:25	FA-FZ	2:10	LJ-MA
10:45	GA-GRL	2:30	MB-MN

Tuesday, June 22, 1965

8:30	MO-NI	10:45	ST-TD
8:55	NJ-PH	11:10	TE-V
9:15	PI-RE	11:30	WA-WH
9:40	RF-RZ	1:00	WI-Y
10:00	SA-SGL	1:25	Z-BAL
10:25	SGM-SS	1:45	BAM-BL

SUMMER SCHOOL CALENDAR

June 23—Wednesday	Classes begin
June 26—Saturday	Classes Follow Tuesday schedule
July 5—Monday	Independence Day, holiday
August 13—Friday	Close of Summer Session

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University Calendar, 1965

Spring Semester

February 2-5	Tuesday-Friday	Spring Semester Registration
February 8	Monday	Instruction Begins
February 22	Monday	Washington's Birthday, Holiday
March 25	Thursday	Maryland Day, not a Holiday
April 15	Thursday	Easter Recess Begins After Last Class
April 20	Tuesday	Easter Recess Ends 8 a.m.
May 12	Wednesday	AFROTC Day
May 27	Thursday	Pre-Examination Study Day
May 28-June 4	Friday-Friday	Spring Semester Examinations
May 30	Sunday	Baccalaureate Exercises
May 31	Monday	Memorial Day, Holiday
June 5	Saturday	Commencement Exercises

Summer Session

June 21-22	Monday-Tuesday	Summer Session Registration
June 23	Wednesday	Summer Session Begins
July 5	Monday	Independence Day, Holiday
August 13	Friday	Summer Session Ends

Short Courses

June 14-18	Monday-Friday	Rural Women's Short Course
August 2-6	Monday-Friday	4-H Club Week
September 7-10	Tuesday-Friday	Fireman's Short Course

Board of Regents
and
Maryland State Board of Agriculture

CHARLES P. McCORMICK, *Chairman*
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Medical Center, Salisbury, 21801

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The Pangborn Corporation, Pangborn Blvd., Hagerstown, 21740

THOMAS B. SYMONS
Suburban Trust Company, 6950 Carroll Avenue, Takoma Park, 20012

WILLIAM C. WALSH
Liberty Trust Building, Cumberland, 21501

MRS. JOHN L. WHITEHURST
4101 Greenway, Baltimore, 21218

Officers of Administration

Principal Administrative Officers

WILSON H. ELKINS, *President*

B.A., University of Texas, 1932; M.A., 1932; B.Litt., Oxford University, 1936; D.Phil., 1936.

ALBIN O. KUHN, *Executive Vice President*

B.S., University of Maryland, 1938; M.S., 1939; Ph.D., 1948.

R. LEE HORNBAKE, *Vice President for Academic Affairs*

B.S., California State College, Pa., 1934; M.A., Ohio State University, 1936; Ph.D., 1942.

FRANK L. BENTZ, JR., *Assistant to the President*

B.S., University of Maryland, 1942; Ph.D., 1952.

ALVIN E. CORMENY, *Assistant to the President, in Charge of Endowment and Development*

B.A., Illinois College, 1933; LL.B., Cornell University, 1936.

Emeriti

HARRY C. BYRD, *President Emeritus*

B.S., University of Maryland, 1908; LL.D., Washington College, 1936; LL.D., Dickinson College, 1938; D.Sc., Western Maryland College, 1938.

GEARY F. EPPLEY, *Dean of Men Emeritus*

B.S., Maryland State College, 1920; M.S., University of Maryland, 1926.

ADELE H. STAMP, *Dean of Women Emerita*

B.A., Tulane University, 1921; M.A., University of Maryland, 1924.

Administrative Officers of the Schools and Colleges

EDWARD W. AITON, *Director, Agricultural Extension Service*

B.S., University of Minnesota, 1933; M.S., 1940; Ed.D., University of Maryland, 1956.

VERNON E. ANDERSON, *Dean of the College of Education*

B.S., University of Minnesota, 1930; M.A., 1936; Ph.D., University of Colorado, 1942.

RONALD BAMFORD, *Dean of the Graduate School*

B.S., University of Connecticut, 1924; M.S., University of Vermont, 1926; Ph.D., Columbia University, 1931.

GORDON M. CAIRNS, *Dean of Agriculture*

B.S., Cornell University, 1936; M.S., 1938; Ph.D., 1940.

WILLIAM P. CUNNINGHAM, *Dean of the School of Law*

A.B., Harvard College, 1944; LL.B., Harvard Law School, 1948.

RAY W. EHRENSBERGER, *Dean of University College*
B.A., Wabash College, 1929; M.A., Butler University, 1930; Ph.D., Syracuse University, 1937.

NOEL E. FOSS, *Dean of the School of Pharmacy*
Ph.C., South Dakota State College, 1929; B.S., 1929; M.S., University of Maryland, 1932; Ph.D., 1933.

LESTER M. FRALEY, *Dean of the College of Physical Education, Recreation, and Health.*
B.A., Randolph-Macon College, 1928; M.A., 1937; Ph.D., Peabody College, 1939.

FLORENCE M. GIPE, *Dean of the School of Nursing*
B.S., Catholic University of America, 1937; M.S., University of Pennsylvania, 1940; Ed.D., University of Maryland, 1952.

IRVIN C. HAUT, *Director, Agricultural Experiment Station*
B.S., University of Idaho, 1928; M.S., State College of Washington, 1930; Ph.D., University of Maryland, 1933.

VERL S. LEWIS, *Dean of the School of Social Work*
A.B., Huron College, 1933; M.A., University of Chicago, 1939; D.S.W., Western Reserve University, 1954.

SELMA F. LIPPEATT, *Dean of the College of Home Economics*
B.S., Arkansas State Teachers College, 1938; M.S., University of Tennessee, 1945; Ph.D., Pennsylvania State University, 1953.

CHARLES MANNING, *Dean of the College of Arts and Sciences*
B.S., Tufts College, 1929; M.A., Harvard University, 1931; Ph.D., University of North Carolina, 1950.

FREDERIC T. MAVIS, *Dean of the College of Engineering*
B.S., University of Illinois, 1922; M.S., 1926; C.E., 1932; Ph.D., 1935.

DONALD W. O'CONNELL, *Dean of the College of Business and Public Administration*
B.A., Columbia University, 1937; M.A., 1938; Ph.D., 1953.

JOHN J. SALLEY, *Dean of the School of Dentistry*
D.D.S., Medical College of Virginia, 1947; Ph.D., University of Rochester School of Medicine and Dentistry, 1954.

WILLIAM S. STONE, *Dean of the School of Medicine and Director of Medical Education and Research*
B.S., University of Idaho, 1924; M.S., 1925; M.D., University of Louisville, 1929; Ph.D. (Hon.), University of Louisville, 1946.

General Administrative Officers

G. WATSON ALGIRE, *Director of Admissions and Registrations*
B.A., University of Maryland, 1930; M.S., 1931.

C. WILBUR CISSEL, *Director of Finance and Business*
B.A., University of Maryland, 1932; M.A., 1934; C.P.A., 1939.

HELEN E. CLARKE, *Dean of Women*
B.S., University of Michigan, 1943; M.A., University of Illinois, 1951; Ed.D., Teachers College, Columbia University, 1960.

WILLIAM W. COBEY, *Director of Athletics*
A.B., University of Maryland, 1930.

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B.S., University of Maryland, 1943.

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B.S., University of Maryland, 1927; E.E., 1931.

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Air Science*
B.A., Arizona State College, 1936; M.A., Columbia University, 1949.

WERNER C. RHEINBOLDT, *Director, Computer Science Center*
Dipl. Math., University of Heidelberg, 1952; Dr. Rer. Nat., University of Freiburg,
1955.

HOWARD ROVELSTAD, *Director of Libraries*
B.A., University of Illinois, 1936; M.A., 1937; B.S.L.S., Columbia University, 1940.

CLODUS R. SMITH, *Director of the Summer Session*
B.S., Oklahoma State University, 1950; M.S., 1955; Ed.D., Cornell University,
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GEORGE O. WEBER, *Director and Supervising Engineer, Department of
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B.S., University of Maryland, 1933.

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A.B., University of Pittsburgh, 1934.

Division Chairmen

JOHN E. FABER, JR., *Chairman of the Division of Biological Sciences*
B.S., University of Maryland, 1926; M.S., 1927; Ph.D., 1937.

HAROLD C. HOFFSOMMER, *Chairman of the Division of Social Sciences*
B.S., Northwestern University, 1921; M.A., 1923; Ph.D., Cornell University, 1929.

CHARLES E. WHITE, *Chairman of the Lower Division*
B.S., University of Maryland, 1923; M.S., 1924; Ph.D., 1926.

CHAIRMEN, STANDING COMMITTEES,
FACULTY SENATE
1964-65

- General Committee on Educational Policy
ALAN G. GRUCHY, *Business and Public Administration*
- General Committee on Student Life and Welfare
JOSEPH F. MATTICK, *Agriculture*
- Committee on Admissions and Scholastic Standing
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- Committee on Instructional Procedures
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- Committee on Scheduling and Registration
DONALD C. GORDON, *Arts and Sciences*
- Committee on Programs, Curricula and Courses
JAMES H. HUMPHREY, *Physical Education*
- Committee on Faculty Research
JAMES A. HUMMEL, *Arts and Sciences*
- Committee on Public Functions and Commencements
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- Committee on University Publications
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- Committee on Intercollegiate Competition
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- Committee on Professional Ethics, Academic Freedom and Tenure
JOHN M. CURTIS, *Agriculture*
- Committee on Appointments, Promotions, and Salaries
STANLEY B. JACKSON, *Arts and Sciences*
- Committee on Faculty Life and Welfare
CHARLES T. G. LOONEY, *Engineering*
- Committee on Membership and Representation
NOEL E. FOSS, *Pharmacy*
- Committee on Counseling of Students
MARY K. CARL, *Nursing*
- Committee on the Future of the University
GEORGE ANASTOS, *Arts and Sciences*

*ADJUNCT COMMITTEES OF THE GENERAL COMMITTEE ON
STUDENT LIFE AND WELFARE*

Student Activities

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Financial Aids and Self-Help

ALVIN W. SCHINDLER, *Education*

Student Publications and Communications

DONALD MALEY, *Education*

Religious Life

THOMAS J. AYLWARD, *Arts and Sciences*

Student Health and Safety

HARRY E. HICKEY, *Engineering*

Student Discipline

GAYLE SMITH, *Arts and Sciences*

Baltimore Campus, Student Affairs

CALVIN GAVER, *Dentistry*

The School

The Summer School of the University of Maryland at College Park provides the opportunity for year-round study and research. For this purpose, the University is offering an extensive and varied program of undergraduate and graduate courses, as well as lectures, special institutes and workshops for educators. More than 7,000 students from the 50 states and approximately 55 foreign countries are expected to attend the University during the eight-week period, June 21 through August 13, within which are included eight-week and six-week courses, as well as workshops and institutes of varying length.

Through its summer program, the University makes its resources available to students desiring a general education, and to those students interested in preparing for professional, scientific and technical areas for which it offers collegiate and graduate level work.

The courses offered by the Summer School are regular University courses, with few exceptions. Each college on the College Park campus is represented in the School's offerings. Courses offered in the summer session are taught by members of the faculty or visiting lectures of outstanding ability. Many departments have increased their course offerings for the 1965 summer session. The 1965 Summer School course offering was planned to provide students enrolled during the academic year an opportunity to continue their studies during the summer. Courses offered include those which enable students to accelerate their programs of study, and to remove deficiencies. The Summer Session academic program offers outstanding educational opportunities to visiting students pursuing degrees at other institutions. The Summer School is a long-standing educational service of the University that provides in-service education to teachers and school administrators. A variety of enrichment experience opportunities in areas of specialization are provided and students are encouraged to participate in them.

A Recreation and Social Activities Committee, working with a full-time Summer Director of Recreation, has planned a varied program of activities of interest to students attending the University during the summer session. University swimming pools will be open with scheduled hours each afternoon and evening. There will be softball, tennis, and golf tournaments, a summer theatre workshop, and a summer chorus in which students are invited to participate.

Planned activities will include round and square dancing, outdoor movies, Chapel vesper services, band concerts, watermelon feasts, guided tours of Washington, and other social functions. The Summer Recreation Director will be available to counsel with groups planning social events.

Academic Information

TERMS OF ADMISSION

All Summer School students new to the University must be officially admitted. This applies to all non-degree as well as degree candidates.

UNDERGRADUATE AND SPECIAL STUDENTS

A student seeking a bachelor's degree in any undergraduate college, who has not been previously admitted to the University, must file application with the Director of Admissions *not later than June 1, 1965*.

A student who already has a bachelor's degree and who either does not wish graduate credit or does not meet requirements for admission to the Graduate School may be admitted as a Special Student to the undergraduate college consistent with his major interests. He should be admitted to the University through the Director of Admissions *no later than June 1, 1965*. Credit so obtained through the College of Education is ordinarily accepted for renewal of teaching certificate. A Special Student may not take courses numbered 200 or above.

GRADUATE STUDENTS

Application for admission to the Graduate School, and all supporting academic records, must be in the office of the Dean of the Graduate School by June 1, 1965.

TRANSFER CREDIT: TO ANOTHER INSTITUTION. The student who wishes to transfer credit to another institution should submit an application on which he writes "For Transfer Only." With the application he should submit a letter from the graduate dean of the institution in which he is enrolled as a degree student, to the Dean of the Graduate School, University of Maryland, requesting permission to work during the summer at the University.

TRANSFER CREDIT: TO THE UNIVERSITY OF MARYLAND. Credit not to exceed six semester hours for course work at other recognized institutions may be applied towards the master's degree, only when such course work has been taken after the student has been admitted to the University of Maryland Graduate School. Before taking course work for transfer the student must have the approval of his adviser, the head of his major department, and the Dean of the Graduate School. Normally, approval may be given only for courses which are not offered by the University of Maryland during the period of the student's attendance. The request for transfer of credit shall be submitted to the Graduate Council for approval when the student applies for admission to candidacy. The candidate is subject to final examination by this institution in all work offered for the degree.

SPECIAL NON-DEGREE CREDIT. The student who already has a master's degree and does not wish to pursue a doctoral program may submit an

application marked "Non-Degree" and with it, an official transcript of all previous undergraduate and graduate study. If the student later desires to embark on a doctoral program, the credit earned in Special Non-Degree status may, at the discretion of the major adviser, be used in a doctoral program.

DEGREE CREDIT. The student who wishes to pursue either a master's or doctoral program must submit, with his application, official transcripts of all work taken in institutions of higher education. The applicant is subject to admission requirements of the Graduate School and of the department in which he hopes to pursue his graduate work.

ACADEMIC CREDIT

The semester hour is the unit of credit. During the summer session a course meeting five times a week for six weeks or four times a week for eight weeks, each requiring the normal amount of outside work, is given a weight of three semester hours. Each class period is 80 minutes in length.

Students who are matriculated as candidates for degrees will be given credit toward the appropriate degree for satisfactory completion of courses. All courses offered in the Summer School are creditable toward the appropriate degree provided they are included in the student's program as planned with his adviser.

All students will receive an official grade report specifying the amount and quality of work completed.

MARKING SYSTEM

The following symbols are used for marks: A, B, C, and D—passing; F—Failure; I—Incomplete. Mark A denotes superior scholarship; mark B, good scholarship; mark C, fair scholarship; and D, passing scholarship. The mark of "I" (incomplete) is exceptional. Complete regulations governing marks are printed in the University's *General and Academic Regulations*.

MAXIMUM LOAD

UNDERGRADUATES. Undergraduate students may earn credit at the discretion of their respective advisers in accordance with the following guide lines:

Students enrolled only in courses of 8-week duration may earn from 8-10 credits.

Students enrolled only in courses of 6-week duration may earn from 6-8 credits.

Students enrolled in combinations of 6 and 8-week courses may earn 7-9 credits.

GRADUATE

Students enrolled only in courses of 8-week duration may earn a maximum of 8 credits.

ACADEMIC INFORMATION

Students enrolled only in courses of 6-week duration may earn a maximum of 6 credits.

Students enrolled in combinations of 6 and 8-week courses may earn a maximum of 7 credits.

SUMMER GRADUATE WORK

Appropriate courses offered by the Summer School may be counted toward any graduate degree program. Doctoral degrees offered through the Graduate School are as follows: Doctor of Philosophy and Doctor of Education. Master's degrees are offered through the Graduate School as follows: Master of Arts, Master of Science, Master of Arts in American Civilization, Master of Education, Master of Business Administration, and Master of Music. A full year of residence or the equivalent is the minimum requirement for each degree. The requirement for any of the above degrees may be obtained upon request from the Graduate School.

For the benefit of the graduate students pursuing doctoral work the Summer School will provide preparatory courses, French 0, and German 0, in preparation for the Fall examinations. About the exact dates for application and examinations please contact the Department of Foreign Languages.

Special regulations governing graduate work in Education and supplementing the statements contained in the Graduate School Announcements are available in duplicated form and may be obtained from the College of Education. Students seeking the master's degree as a qualification for a certificate issued by the Maryland State Department of Education or any other certifying agency should consult the appropriate bulletin for specific requirements.

All students desiring graduate credit, whether for meeting degree requirements, for transfer to another institution, or for any other purpose, must be regularly matriculated and registered in the Graduate School.

CANDIDATES FOR DEGREES

All students who expect to complete requirements for degrees during the summer session should make application for diplomas at the office of the Registrar during the first two weeks of the summer session.

GENERAL EDUCATION PROGRAM

The University has instituted a new series of related course requirements which together constitute a general education program.

GENERAL INFORMATION

Essentially this program includes nine semester-hour credits of English (three credits of composition, six of literature); six credits in history of which three must be in American history; six credits chosen from various fields of the social sciences; seven credits in science; three credits in mathematics; three credits in fine arts or in philosophy. Two semesters of physical education and a course in health education are required of all undergraduates.

Greater detail will be found in the publication, *General and Academic Regulations*.

General Information

REGISTRATION

Students previously admitted to the University as undergraduate or graduate and presently in good standing may register for the summer session without further application.

All new graduate students must obtain admission to the University from the Graduate School before registration. Every student planning to register for a course or courses must be admitted to the University, regardless of their status as a degree or non-degree student.

Registration for undergraduate and graduate students will take place in accordance with the Registration Schedule printed on page iii of this catalog. No student will be permitted into the Armory before the time listed in the Registration Schedule.

Students may register in "late registration" at the Registrar's Office on June 23. After June 23, exceptional cases may be registered only after approval of the appropriate dean. The late registration fee, charged on and after June 23 is \$20.00.

REGISTRATION, ALL COLLEGES EXCEPT THE COLLEGE OF EDUCATION

Students in all colleges, except the College of Education, will begin registration by securing registration cards from the respective College offices. Registration cards must be approved by both the student's adviser and dean. Graduate students secure the approval of the Dean of the Graduate School. After approval, registrations are completed at the Armory where students secure section assignments, receive bills, pay fees, and submit all forms to the Registrar's representatives. Until all completed forms are submitted to the Registrar's representatives, registration is neither complete nor official.

GENERAL INFORMATION

REGISTRATION: COLLEGE OF EDUCATION ONLY

All Education advisers will be located in the basement of the Armory. Students will be admitted only through the south-west door of the Armory according to the alphabetical schedule posted on page iii of this catalog. Students then proceed to the room in which their respective advisers are located in the Armory basement.

Early Registration: Students must request special permission in writing from the Dean of the College of Education before Monday, June 21, 1965, giving the reason for the request. Upon approval, a form will be issued to the student, allowing him entrance to the Armory, out of alphabetical order.

No special permission will be given for reasons of unawareness about the schedule or because a student is riding with someone who registers earlier. In the latter case, all students riding together should plan to register at the latest hours scheduled for anyone in the group.

Registration cards must be approved by both the student's adviser and the Dean of the College of Education. Graduate students must in addition receive the approval of the Dean of the Graduate School. Graduate students carrying the official Graduate School matriculation card may obtain the Graduate Dean's approval in the Armory. Graduate students not carrying the official Graduate School matriculation card must report to the Graduate School office, Rooms Q 112-115, Business and Public Administration building, before proceeding to the upper floor of the Armory to complete registration. After approval, registrations are completed on the first floor of the Armory where students secure section assignment, receive bills, pay fees, and submit all forms to the Registrar's representatives. Until all completed forms are submitted to the Registrar's representatives, registration is neither complete nor official.

LENGTH OF CLASS PERIOD

Classes during the 1965 summer session will meet on the following time schedule:

8:00 — 9:20

9:30 — 10:50

11:00 — 12:20

12:30 — 1:50

2:00 — 3:20

3:30 — 4:50

Weekly Class Schedule

6-week classes

2-credit courses meet 4 days as indicated in the bulletin.

3-credit courses meet daily.

4-credit courses meet daily and include multiple periods for laboratory.

8-week classes

2-credit courses meet M.W.F.

3-credit courses meet M.T.Th.F.

4-credit courses meet daily, plus laboratory time.

5-credit courses meet daily, plus 2 additional periods to be arranged each week.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students if at the time of their registration their parents have been domiciled in the State of Maryland for at least six months.

The status of the residence of a student is determined at the time of his first registration in the University and may not thereafter be changed by him unless, in the case of a minor, his parents move to and become legal residents of Maryland by maintaining such residence for at least six months. However, the right of the minor student to change from a non-resident status to resident status must be established by him prior to the registration period set for any semester or session.

Adult students are considered to be residents if at the time of their registration they have been domiciled in Maryland for at least six months, provided such residence has not been acquired while attending any school or college in Maryland or elsewhere. Time spent on active duty in the armed services while stationed in Maryland will not be considered as satisfying the six-months period referred to above except in those cases in which the adult was domiciled in Maryland for at least six months prior to his entrance into the armed service and was not enrolled in any school during that period.

The word "domicile" as used in this regulation shall mean the permanent place of abode. For the purpose of this rule only one domicile may be maintained.

TUITION AND FEES

UNDERGRADUATE STUDENTS

General tuition fee, per credit hour	\$15.00
Nonresidence fee	15.00
Must be paid by all students who are not residents of Maryland.	

GENERAL INFORMATION

*Application fee (see explanation below)	10.00
Matriculation fee	10.00
Payable only once, upon admission to the University. Every student must be matriculated.	
Auxiliary facilities fee	3.00
Infirmary fee	1.00
Recreation fee	1.00

GRADUATE STUDENTS

General tuition fee, per credit hour	\$18.00
Matriculation fee	10.00
Payable only once, upon admission to the Graduate School.	
Recreation fee	1.00
Required of all students registered in the Summer School.	
Infirmary fee (voluntary)	1.00
The Infirmary services are available to graduate students who elect to pay at the time of registration the fee of \$1.00 for the summer session.	
Testing fee (new graduate students in Education only)	5.00
There is no non-residence fee for graduate students.	

MISCELLANEOUS INFORMATION

Auditors pay the same fees as regular students.

The graduation fee is \$10.00 for bachelor's and master's degrees, and \$50.00 for doctoral degrees.

A fee of \$5.00 is charged for each change in program after June 25. If such change involves entrance to a course, it must be approved by the instructor in charge of the course entered. Courses cannot be dropped after July 9. All changes must be approved by the appropriate dean and filed in the Office of the Registrar.

A special laboratory fee is charged for certain courses where such fee is noted in the course description.

Laboratory courses in chemistry carry laboratory fees of \$12.00 and \$20.00; in addition the student is charged for any apparatus which cannot be returned to the stock room in perfect condition. Other laboratory fees are stated in connection with individual courses.

*The application fee for the undergraduate summer session applicant partially defrays the cost of processing applications for admission to this division of the University. If a new applicant enrolls for the term for which he applied, the fee is accepted in lieu of the matriculation fee. Applicants who have been previously enrolled with the University of Maryland at College Park or Baltimore, or at one of its off-campus centers are not required to pay the application fee since they have already paid the matriculation fee.

GENERAL INFORMATION

Physical education fee charged each student registered for any physical activity course, \$6.00.

Late registration fee, \$20.00.

An additional late application fee of \$10.00 will be assessed against students who fail to apply for graduation within the first three (3) weeks of a summer session. Students who apply after the end of the fourth week of a summer session will be required to wait for the next academic semester in order to obtain a diploma.

WITHDRAWAL AND REFUND OF FEES

Any student compelled to leave the University at any time during the summer session must secure the Application for Withdrawal form from the office of his dean and file it in the Office of the Registrar, bearing the proper signatures. If this is not done, the student will not be entitled, as a matter of course, to a certificate of honorable dismissal, and will forfeit his right to any refunds to which he would otherwise be entitled. The date used in computing refunds is the date the Application for Withdrawal is filed in the Office of the Registrar.

In the case of a minor, official withdrawal will be permitted only with the written consent of the student's parent or guardian.

With the exception of board charges, students withdrawing from the University will receive a refund of all charges, except the matriculation fee, in accordance with the following schedule:

<i>Period From Date Instruction Begins</i>	<i>Percentage Refundable</i>
One week or less	70%
Between one and two weeks	50%
Between two and three weeks	20%
After three weeks	0

No refunds of fixed charges, lodging, tuition, laboratory fees, etc., are allowed when courses are dropped, unless the student withdraws from the University.

LIVING ACCOMMODATIONS AND MEALS

Housing accommodations are available at the following costs, on the basis indicated:

REGULAR RESIDENCE HALLS	DOUBLE OCCUPANCY	SINGLE OCCUPANCY
Weekly rate	\$ 9.00	\$ 13.00
Six weeks session	54.00	78.00
Eight weeks session	72.00	104.00

Since most of the rooms in the residence halls are double rooms, there is no guarantee that a request for a single room can be granted. No room

GENERAL INFORMATION

deposit is required for the summer session; however, the full applicable room charge is payable at registration. No refunds of room charges will be made after the third week of the summer session. All students are held responsible for compliance with University regulations. The University reserves the right to inspect residence hall rooms when deemed necessary by the staff.

The typical student room is furnished with a bed, a chest of drawers, a desk, and chair. Students should supply themselves with other essential items such as a study lamp, wastebasket, and ashtrays. Students must provide themselves with linens and a pillow, either from home or from the commercial linen service which operates on the University campus. This company rents sheets, pillow cases, towels, blankets, and pillows for a nominal fee. Arrangements for linen service can be made after your arrival.

The University residence halls will open for occupancy at 2:00 P.M. Sunday, June 20, and will close at noon on Saturday, August 14.

Early application for a reservation is advisable, as only those who have made reservations can be assured that rooms are available for occupancy upon their arrival. Rooms will not be held later than noon on Wednesday, June 23. If you desire to make application for campus residence, please complete, sign, and return the Room Application Card found in this Bulletin. Indicate your precise classification, the exact dates and number of weeks of attendance, type of room desired, and whether or not you desire board on a prepaid basis. You will be notified by an assignment letter after June 1 of the time and place to report to claim your room.

You will be given your mailing address and telephone number at the time you receive your room assignment. Your mail and telephone calls *cannot* be delivered to you without this specific information.

Campus housing is not available for faculty members during the summer session. Listings of off-campus rooms, apartments, and houses are available in the University Housing Office, North Administration Building. Students occupying off-campus housing will maintain the same standards as required of those in the University residence halls and fraternity houses. Board is available to all students under the following options:

- (a) Cafeteria style with cash payment for each individual meal.
- (b) On a prepaid basis at the following rates payable at time of registration:
 - \$72.00 for the six weeks session.
 - \$96.00 for the eight weeks session.

No refunds will be made on board to those students who elect the prepaid basis except in the case of withdrawal from the University or residence halls, in which event refund will be made on a pro-rata weekly basis.

STUDENT HEALTH

The University Infirmary, located on the campus near the Student Union, provides medical service for the undergraduate students in the summer session, and also for those graduate students who elect to pay the \$1.00 Health Service fee. Students who are ill should report promptly to the University Infirmary in person. Serious emergencies may be reported by phone to Ext. 7666 or 7667, or if transportation for emergency is needed call Campus Police, Ext. 315. Doctor's Office hours are: Week days, 9:00 a.m. to 4:00 p.m.; week ends, 10:00 a.m. to 11:00 a.m. Nurses are on duty 24 hours each day.

PARKING OF AUTOMOBILES

For use of students, staff members, and employees, several parking lots are provided. Students may park in lot 1, 3, 6 and 7. Also lots 10 and 11. All other lots are reserved for faculty and staff members. The University rules forbid the parking of cars on any campus road. These rules are enforced by campus police.

LIBRARIES

Libraries of the University are located on the College Park and Baltimore campuses. They consist of the general University Library (the McKeldin Library), the Engineering and Physical Sciences Library, and the Chemistry Library in College Park; and the Health Sciences Library and the Law Library in Baltimore. The libraries have a total book collection of almost 700,000 cataloged volumes, and more than 7,000 periodicals and newspapers are received currently.

In addition to the total of cataloged volumes cited above, the College Park libraries contain over 140,000 U. S. government and United Nations documents, 340,000 negatives and prints, 2,600 film strips, 3,000 slides, and thousands of phonorecords, maps, and technical reports.

Bibliographical facilities of these libraries include, in addition to the card catalogs, printed catalogs of other libraries, e.g., British Museum, Bibliotheque Nationale, and Library of Congress, as well as trade bibliographies of foreign countries, special bibliographies of subject fields and similar research aids.

In the McKeldin Library are study carrels available to faculty members and graduate students whose study and research require extensive use of library materials. Lockers are likewise available for assignment to graduate students. Facilities for reading microtext materials and for use of typewriters are also provided. Interlibrary loan service from other institutions is provided for those engaged in research.

SPECIAL SUMMER ACTIVITIES

UNIVERSITY BOOKSTORE

For the convenience of students, the University maintains a University Bookstore, located in the Student Union Building, where students may obtain at reasonable prices textbooks, stationery, classroom materials and equipment. The Bookstore operates on a cash basis.

FOR ADDITIONAL INFORMATION

Detailed information concerning fees and expenses, scholarships and awards, student life, and other material of a general nature, may be found in the University publication titled *An Adventure in Learning*. This publication may be obtained on request from the Catalog Mailing Room, North Administration Building, University of Maryland at College Park. A detailed explanation of the regulation of student and academic life, may be found in the University publication titled, *University General and Academic Regulations*. This is mailed in September and February of each year to all new undergraduate students. Requests for course catalogs for the individual schools and colleges should be directed to the deans of these respective units, addressed to:

COLLEGES LOCATED AT COLLEGE PARK:

Dean
(College in which you are interested)
The University of Maryland
College Park, Maryland

PROFESSIONAL SCHOOLS LOCATED AT BALTIMORE:

Dean
(School in which you are interested)
The University of Maryland
Lombard and Greene Streets
Baltimore 1, Maryland

Special Summer Activities

As an integral part of its summer program, the University offers a Summer Lecture Series; institutes supported by the National Science Foundation, National Defense Education Act, and other granting organizations; and specialized educational activities through workshops. Opportunities for participating and specific information about these events are provided below.

THE SUMMER LECTURE SERIES

A series of lectures, open to members of the University community, is planned for the 1965 Summer Session. For the series, distinguished

SPECIAL SUMMER ACTIVITIES

scholars, national leaders, and important state and University officials are usually invited to speak.

A committee of the faculty selects the theme for the lectures, and invites the speakers. The lectures are a contribution to the social and cultural offerings of the summer session.

Lecturers are scheduled for the convenience of students and faculty in air conditioned facilities on the College Park campus.

INSTITUTES

INSTITUTE IN COUNSELING AND GUIDANCE TRAINING

The National Defense Education Act provides for summer institutes in Counseling and Guidance Training. The institute this summer is Ed. 189-41 counseling practicum, with a didactic correlate. Enrollees will counsel local high school students under the supervision of counseling psychologists. The didactic content will emphasize counseling theory and methodology. Institute activities are for the full day.

Enrollees will be secondary school counselors from the public and private non-profit secondary schools of Maryland and other states. Tuition and other fees are exempted. Enrollees from public schools will receive a \$75 weekly stipend with a \$15 allotment for each dependent. Nomination of Maryland public school counselors will be through the superintendents' offices of the local systems. Secondary school counselors in Maryland private, non-profit schools, and in non-Maryland schools should apply to Dr. Philip B. Ray, University Counseling Center, if interested in more information.

INSTITUTE FOR HIGH SCHOOL TEACHERS OF BIOLOGY

The Colleges of Agriculture, Arts and Sciences, and Education, and the National Science Foundation are cooperating to offer a program of courses designed for high school teachers of biology. These courses combine in various ways to enable high school teachers to improve their knowledge of the biological sciences and related material during an eight-week institute. Credit earned in the Summer Institute in Science for High School Teachers of Biology and in similar related science courses may accumulate up to one-half of the credit hours requirement for the Master of Education degree.

A National Science Foundation grant makes it possible for the 1965 summer institute to provide financial assistance for about 40 participants at the standard N.S.F. rate of \$75 per week plus \$15 per week for each dependent (to a maximum of four). A travel allowance of 4 cents per mile for a single round trip from the participant's home to the institute will also be paid (maximum \$80). All tuition and fee charges will be paid by the N.S.F. grant.

SPECIAL SUMMER ACTIVITIES

The summer institute covers the general fields of the biological sciences. Basic to the program will be a required seminar covering recent developments in the biological sciences. This two credit seminar is listed in the Summer School Bulletin as Botany 199-S and will meet all day Wednesday during the regular eight-week summer session.

The institute program will include the following courses which are described in detail in this Bulletin under the headings of the respective departments:

Bot. 136, Bot. 151-S, Bot. 199-S, Ent. S-121, Zool. 118.

A maximum of 8 credit hours will be taken by each stipend holder.

Inquiries should be sent to: Dr. J. David Lockard, Director of the N.S.F. Summer Science Institute, Department of Botany, University of Maryland, College Park, Maryland.

INSTITUTE FOR TEACHERS OF MATHEMATICS IN JUNIOR HIGH SCHOOL

The Department of Mathematics of the College of Arts and Sciences with the financial support of the National Science Foundation is offering a six-week summer institute for junior high school teachers of mathematics to assist the teachers in improving the quality of teaching of mathematics.

The institute should also give the teachers a better understanding of current curricular developments and make it possible for them to interpret these developments for junior high school programs.

Participants of the institute who are graduate students in the College of Education may obtain graduate credit for the six hours of course work completed in connection with the Institute.

Mathematics 182—Introduction to Algebra (3) and Mathematics 189—Summer Institute for Teachers of Science and Mathematics (3) are required of each participant. For more information on the courses see the listings under the Department of Mathematics. In addition there will be a demonstration class in which experimental material for grades seven and/or eight will be taught. A seminar will provide for discussion of the materials in the demonstration class and associated teaching problems.

Financial assistance in the form of a National Science Foundation grant will be available to about 36 participants at the standard N.S.F. rate of up to \$75 per week plus \$15 per week for each dependent (to a maximum of four). This stipend will be tax free to students enrolled for credit toward a degree. A travel allowance of 4 cents per mile for a single round trip from the participant's home to the institute (to a maximum of \$80) will also be paid. All tuition and fees will be waived for participants, except the recreation fee. Participants are expected to have had at least two years' experience teaching mathematics at the junior high

SPECIAL SUMMER ACTIVITIES

school level and to have been appointed to a junior high school position for 1965-66.

Inquiries should be addressed to: Professor J. H. Henkelman, Director, Summer Institute, College of Education, University of Maryland, College Park, Maryland 20742.

WORKSHOPS

ADVANCEMENTS IN MODERN HEALTH AND HEALTH EDUCATION (Hea. 189)

In cooperation with Federal and State Agencies, the University of Maryland will provide an institute to improve school health education by helping to bring up to date the knowledge of advancements in health sciences and health education. The program will be primarily concerned with the health and health problems of children and youth. It will be of special interest to school, public health and health personnel who are responsible full or part time for health education in schools.

Speakers and discussion leaders will be specialists from the University, the National Institutes of Health, and other health centers. Emphasis will be focused upon mental health and social adjustment, sex education, environmental hazards, and trends in health education.

Six-week participation, 6 hours credit. First or second three week periods participation, 3 hours credit. The institute will meet daily from 8:30-12:00.

EDUCATION OF CHILDREN WITH LEARNING IMPAIRMENTS (Ed. 189-29)

This workshop will consider the theoretical background and the methods, curricula and materials employed in the approach to the various learning problems of children.

Opportunities for observation, participation and consultation in program planning, curriculum organization, and the use of methods and materials will be provided according to the primary learning problems involved: Mentally Handicapped (Educable), Mentally Deficient (Trainable), Perceptual Learning Problems, Disturbances in Emotional Development, and Motor Handicapped. Selected consultants will be utilized.

The workshop will meet off-campus daily from 8:30-12:00 June 21 to July 30. Four units of undergraduate or graduate credit may be earned.

Students planning to attend the Workshop should request the Special Education Summer Session Brochure for program details from Dr. Jean Hebel, Program of Special Education, University of Maryland, College Park, Maryland.

SPECIAL SUMMER ACTIVITIES

EDUCATION IN FAMILY FINANCE WORKSHOP (Ed. 189-1)

The Colleges of Education, Business and Public Administration, and Home Economics, in cooperation with the National Committee for Education in Family Finance, offer a four-week, four-credit workshop June 21 through July 16. The workshop program includes learning experiences in subject matter, curriculum construction, and educational techniques. During the six hour day participants will have opportunity to develop broad understandings of concepts and facts relating to family financial security in the areas of budgeting and financial planning, savings and investments, banking services, insurance, home ownership, taxation, wills and estates, social security and pension plans, and consumer credit. The workshop will also provide the opportunity to develop teaching materials and curriculum guides for use in improving and expanding school programs in family finance education.

Participants will register for credit through course Ed. 189-1, Workshops, Clinics, and Institutes: Education in Family Finance. Participants must be admitted to either the College of Education or the Graduate School. If graduate credit is desired, admission to the Graduate School must be completed before June 1.

Scholarships covering tuition will be granted to qualified applicants. Interested persons should make application for scholarship on a special form which will be available upon request. Each scholarship recipient must be recommended to the workshop by his superintendent or principal. All correspondence concerning the workshop should be addressed to C. Raymond Anderson, Director, Family Finance Workshop, College of Education, University of Maryland, College Park, Maryland.

EDUCATOR'S WORKSHOP ON AUTOMATIC DATA PROCESSING (Ed. 189-53)

(Punched Card and Electronic Computers)

The workshop is open to all teachers interested in automatic data processing as an important aspect of the high school education program. This workshop should be of particular interest to those persons teaching and supervising courses in business and mathematics. *No formal mathematics is required as a prerequisite to this workshop.*

Leaders in the fields of automatic data processing and education, as well as representatives from manufacturers, will be used extensively as instructors and consultants. Workshop lectures, demonstrations, field trips, laboratory work, and group and individual conferences will be scheduled throughout the session.

Specifically, the participants will have opportunities to study:

1. The principles of IBM punch card data processing (IBM card, card punch, sorter, tabulator, reproducer, and accounting machines will be included).

SPECIAL SUMMER ACTIVITIES

2. The basic concepts and principles of computers as well as the study of one programming language in detail, thus enabling the student to submit problems to the computer located at the University center.
3. The impact of the punched card and computer systems upon the design and construction of courses of study in the high school including the place for such courses in the high school curriculum, the types of students who should enroll in such courses, and the qualifications of teachers conducting such courses.

This six-week workshop will meet three hours per day plus a daily laboratory from June 21 to July 30 in the new air-conditioned Business and Public Administration Building. This workshop is listed under "Course Offerings" as Ed. 189-53. Six hours of credit may be earned in the workshop. If graduate credit is desired, application for admission to the Graduate School must be made before June 1. Persons not desiring credit may register to audit the course. All applicants must apply for matriculation in the University either through the Graduate School or the College of Education before they can be permitted to register in the workshop. Matriculation, registration, and other fees for correct admission and enrollment are the same as for other summer school registrants. Early application is encouraged so as to be assured a place in the workshop for the enrollment is limited.

Interested persons should make application on a special form which will be available upon request. All correspondence concerning application or information concerning the workshop should be addressed to: Dr. Arthur S. Patrick, College of Education, University of Maryland, College Park, Maryland.

FOR TEACHERS OF SECONDARY SCHOOL ENGLISH (Ed. 189-47)

The College of Education, in cooperation with the department of English, the Maryland State Department of Education, and the Maryland Council of Teachers of English will sponsor a workshop for teachers of secondary school English.

The emphasis will be upon the concept of integration in the teaching of literature, composition and language, through deeper insight into the humanities, through better acquaintance with the newer media of instruction, and through the development of new techniques and materials of instruction.

The workshop will be held from June 21 to July 9, from 9:30 a.m. to 3:30 p.m., Monday through Friday. Three (3) hours of credit may be earned. All workshop participants must be admitted to the University as special students or to the Graduate School as graduate students before June 1. Enrollment will be limited and preference will be given to teach-

SPECIAL SUMMER ACTIVITIES

ers with two years or more of secondary school experience. Registration will be June 21-22.

All correspondence concerning application or information should be addressed to Miss Marie D. Bryan, College of Education.

WORKSHOP IN HUMAN DEVELOPMENT

(H. D. Ed. 112, 114, 113, 115, 212, 214, 213, 215)

The Institute for Child Study, College of Education, offers a six-week human development workshop each summer providing opportunities for (1) study and synthesis of scientific knowledge about human behavior; (2) experience in the analysis of case records; (3) preparation of study group leaders for in-service child and youth study programs; (4) planning in-service child and youth study programs for teachers or other human relations workers; (5) planning preservice teacher education courses and laboratory experiences for prospective teachers; (6) examination of implications of scientific knowledge about human development and behavior for school organization, curriculum development, guidance services, club leadership, and other programs and procedures designed to foster mental health and optimal development of children, youth, and adults.

The workshop is designed for teachers and administrators who have been actively engaged in the Child and Youth Study Program sponsored by the Institute, for persons who are interested in participating in such a program, and for persons in other fields where human relations are a vital factor.

This workshop will extend from June 21 to July 30. Workshop lectures, laboratory groups and seminars will be scheduled between 8:00 a.m. and 12:00 p.m. Special lectures, interest groups and conferences are scheduled from 1:30 to 3:00 p.m.

Inquiries concerning this and other workshops in human development should be addressed to Director of Summer Workshops, Institute for Child Study, University of Maryland, College Park, Maryland.

CHILD STUDY LEADERS WORKSHOP (Ed. 189-33)

For leaders and prospective leaders of child and youth study groups who cannot attend the full six weeks workshop, a two-week workshop will be held on the University campus from June 21 to July 2. Each day's activities will include a lecture-discussion period centering around major scientific concepts explaining growth, development, and behavior; laboratory periods for analyzing case record material at the first, second, or third year level of the program; reading and special interest periods. (Participants will choose the year level of the group they expect to lead). Two hours' credit can be earned for full time participation in one of these workshops.

SPECIAL SUMMER ACTIVITIES

APPLICATIONS OF HUMAN DEVELOPMENT PRINCIPLES IN CLASSROOMS (Ed. 189-35)

For people who have had three or more years of child study experience either in workshops or in groups during the school year, a 2 credit workshop will be held at the University from July 5 to July 16. Classroom practices will be examined in the light of human development principles, and procedures will be studied for possible beyond-third-year action research projects during the school year. Opportunities will be offered also to superintendents, supervisors, and principals who are interested in exploring the implications of human development principles for school operation.

HUMAN DEVELOPMENT AND RELIGIOUS EDUCATION (Ed. 189-36)

Two workshops in human development, each for 2 credit hours, for persons in the field of religious education will be held on the University campus from July 19 to July 30. These workshops will be entirely non-denominational and any person responsibly concerned with religious education can appropriately enroll regardless of his faith.

A workshop for persons without prior workshop experience will examine scientific knowledge about human development, learning, behavior and adjustment, and will consider the implications of this knowledge for religious education practice in vacation, weekday, and Sunday schools operated by church groups.

Advanced workshops for persons who have had a previous workshop in Human Development and Religious Education will provide advanced experiences with concepts and analyses.

ACTION RESEARCH IN HUMAN DEVELOPMENT EDUCATION (Ed. 189-37)

A workshop for teachers and other school personnel who are interested in learning more about action research or in initiating action research projects in their own schools. This 2 credit workshop will be held at the University from August 2 to August 13. The role of action research in the solution of educational problems will be emphasized. Participants will have the opportunity to learn about and to develop designs and instruments for carrying out action research in their own schools and classrooms. Preference in enrollment will be given to persons coming as teams for the purpose of developing an action research design for implementation in their own school or school system.

The daily schedules of all two weeks workshops will be similar to those of the six weeks workshop. *Only full time participants can be accepted.* These two-week workshops may be taken for either graduate or undergraduate credit.

SPECIAL SUMMER ACTIVITIES

HUMAN RELATIONS IN EDUCATIONAL ADMINISTRATION (Ed. 189-26)

This workshop is concerned with the development of leadership teams capable of providing in-service programs in human relations in local school systems. In addition to basic theory, the workshop will center on the practice and acquisition of specific human relations skills.

Preference in enrollment will be given to teams representing Maryland school systems which have participated in the workshop in the past, and to teams of four to six persons designated by other Maryland school systems.

Enrollment in the workshop will be limited. Applications for team participation from local school systems will be processed in the order received. If more than one application is received at the same time, the director of the workshop will make the final decision.

The workshop will meet daily from 9:00 a.m. to 3:00 p.m., June 21 through July 30. A student may earn six semester hours of graduate credit.

INSTRUMENTAL MUSIC IN HIGH SCHOOL (Mus. Ed. 180)

Through the cooperation of the Department of Music, the College of Education, and University College, Workshop in Music will be offered during the 1965 Summer Session. The regular procedures for admission to the University, listed elsewhere in this bulletin, apply also to the workshop.

The workshop with its band section directed by Hubert Henderson and Acton Ostling, Jr., is offered during the period June 21-July 30. Participants will register for Mus. Ed. 180, Instrumental Music for Secondary Schools (3 credits) and will meet daily to discuss, analyze, and perform new or unfamiliar band literature. Visiting lecturers and conductors will appear frequently throughout the workshop.

In addition, there will be opportunities to observe a selected senior high school band and chorus (in residence June 28-July 2) conducted by Lt. Col. William F. Santelmann and Weston Noble, and a junior high school band (in residence July 5-9). The rehearsals of the bands and chorus will be open to students enrolled in other Music and Music Education courses during the Summer Session. The senior high school band and chorus will give a joint concert on July 2.

Copies of a brochure containing detailed information about the workshop may be obtained by addressing the Department of Music. See pp. 7-10 for the applicable fees, including registration, dormitory room, and supplementary fee.

INSTRUCTIONAL MATERIALS (Ed. 189-8)

The Workshop in Instructional Materials will be offered for school librarians at all levels, school administrators, and classroom teachers in

SPECIAL SUMMER ACTIVITIES

grades kindergarten to twelve, for three weeks, June 21 to July 9. It is designed to give librarians, teachers, and other school personnel an opportunity to work together on problems in the selection, organization and utilization of instructional materials in school programs. Consideration will be given to materials of all types, including: books, films, filmstrips, records, free and inexpensive materials. All grade levels and subject areas will be included. A student may earn three hours of graduate or undergraduate credit in Education or Library Science.

Further information may be obtained by writing to: Dale W. Brown, 456 McKeldin Library, University of Maryland, College Park, Maryland.

PHYSICAL ACTIVITY IN RECREATION PROGRAMS FOR THE RETARDED (Rec. 189-A)

This is a cooperative workshop, with Recreation, Special Education, and the Joseph P. Kennedy, Jr., Foundation, collaborating. It will feature an exploration of the problems involved in programming, staffing, and skills instruction in the special recreation program for the mentally retarded child. Specific emphasis is placed upon training the prospective teacher and recreation leader of the mentally retarded in the methods and techniques of teaching recreational skills to the retarded. Valuable laboratory experiences involving working with the retarded in a Day Camp setting will provide students with practical problems in special techniques for the retarded child.

The workshop will meet daily, Monday through Friday, 9:00 a.m. to 3:00 p.m., from June 7-July 2. The first week will be spent in orientation and training for work in the Day Camp. Preparation will include sessions on retardation, skills instruction, theory and principles of recreation for the retarded, and evaluative techniques. The final three weeks will be spent in actual laboratory work experience in the Shriver Day Camp, Rockville, Maryland. Daily seminars concerning problem areas confronted will be conducted throughout the duration of the workshop.

All inquiries regarding application or information should be addressed to Mr. Ronald C. Johnson, Workshop Director, College of Physical Education, Recreation and Health, University of Maryland, College Park, Maryland.

SCHOLASTIC JOURNALISM WORKSHOP (Jour. 173-S)

The third annual Scholastic Journalism Workshop is sponsored by the Department of Journalism and Public Relations, in cooperation with the Maryland-Delaware Press Association and the Maryland Scholastic Press Advisers Association.

This workshop for school newspaper advisers puts emphasis on the scholastic press: objectives, editing, reporting, head writing head schedule,

SPECIAL SUMMER ACTIVITIES

layout, production, circulation, advertising, photography and staff. One edition of a paper is produced under supervision by members of the workshop.

This workshop, devoting all of its time to scholastic journalism, will meet from 10:00 to 12:00 and 1:00 to 3:30, Monday through Friday, June 21-July 9, in the Journalism Building. Three (3) hours of credit may be earned.

Each workshop participant must be admitted to the University as a special student or to the Graduate School as a graduate student before June 1. Enrollment will be limited, and preference will be given to teachers with two years or more of secondary school experience. Registration will be June 21 and 22.

Correspondence concerning application or information should be addressed to Prof. Alfred A. Crowell, Department of Journalism and Public Relations.

PHYSICAL EDUCATION (SKILLS TECHNIQUES) (P.E. 189)

This workshop offers professional assistance to teachers of physical education. A realistic foundation for physical education will be developed and related to modern programs. Individual and group problems will be given special consideration.

This workshop will meet from 8:30 a.m. to 12:00 noon and 1:00-3:00 p.m. daily for three weeks, June 21 to July 30. Six (6) credits, either graduate or undergraduate, are offered. In either case, the credits are counted as "content" for certification in Maryland.

SCHOOL RECREATION FOR EXCEPTIONAL CHILDREN (Rec. 189-B)

In cooperation with the Special Education Summer Workshop Program, the College of Physical Education, Recreation, and Health offers an off-campus Recreation Workshop for teachers and prospective professionals. The workshop will be centered around an actual recreation program conducted for the exceptional children participating in other portions of the Special Education Workshop.

Opportunities will be provided for students to gain first-hand information regarding the planning, organizing, and administering of school recreational activities for children with learning problems. Lectures, seminar sessions, and cooperative organization of useful materials will be based upon the essentials of the laboratory practicum.

The workshop will meet daily from 12:30-3:30 P. M., June 21—July 30, 1965, and will offer the undergraduate and/or special student four (4) semester hours credit.

SPECIAL SUMMER ACTIVITIES

SUPERVISION OF STUDENT TEACHERS (Ed. 189-7)

The workshop is planned for qualified and experienced teachers who may be assigned a student teacher during the school year. The characteristics of good student teaching programs are studied, as well as such topics as the role of the cooperating teacher, university supervisor, principal, etc. Research material, consultants, and teacher education literature are used.

The workshop will meet 9:30 a.m.-3:30 p.m. daily from June 21 to July 9, 1965. Three credits, graduate or undergraduate are earned. For further information write: James Collins, College of Education.

TEACHING CONSERVATION OF NATURAL RESOURCES (R. Ed. 170, 171)

The College of Agriculture and the Conservation Education Division of the Natural Resources Institute cooperate in offering this workshop devoted to the study of the State's basic wealth, its natural resources. Basic source information will be available, specimens will be collected, pictures will be taken in different resource regions, teaching aids will be evaluated, and effective methods of teaching conservation and natural resources will be studied. The workshop offers six semester hours of graduate credit.

State and federal workers in conservation of natural resources will be used extensively as consultants in their specialties. Field trips will be taken to all the natural regions of the State so that students will be able to observe the resources problems and current practices. Adequate opportunity will be provided for students to analyze problems as a group and develop logical solutions.

The workshop will be held on the College Park campus of the University June 21 to July 30, 1965.

TEAM TEACHING (Ed. 189-57)

A workshop on team teaching will be offered to classroom teachers and school administrators for three weeks from June 21 to July 9. It is designed to give the teachers and administrators an opportunity to develop team teaching projects to be implemented in their local schools. Teams of teachers from individual schools are encouraged to make application.

Team teaching is an organizational concept for instruction in which a group of teachers, in a cooperative venture, may undertake an educational program that provides more challenging opportunities and enriching experiences for students. Team teaching proposes to improve instruction through the reorganization of personnel, resulting in a team of two or more teachers with complementary talents working cooperatively, who assume joint responsibility for the planning, administration and evaluation of the educational program for a distinct student group. Large group instruction, small group instruction, independent study, programmed instruction, and other newer media of instruction will be considered. Lectures will

SPECIAL SUMMER ACTIVITIES

include some given by school personnel who have been involved in successful team teaching experiences.

The workshop will meet daily from 9:30 a.m. to 3:30 p.m. from June 21 to July 9 and bears three semester hours of credit.

All workshop participants must be admitted to the University as special students or to the Graduate School as graduate students before June 1. Enrollment will be limited and preference will be given to teachers with two or more years of experience.

Application forms may be obtained from Dr. Orval Ulry, Department of Secondary Education, University of Maryland, College Park, Maryland 20742.

TYPEWRITING DEMONSTRATION FOR BUSINESS EDUCATION TEACHERS

The College of Education offers the business teacher registered during the summer session an opportunity to observe pupils at work in a typewriting class. These observations will aid the classroom teacher in: (1) designing purposeful classroom activities for developing basic typewriting skills, (2) planning with the pupil the organization of an effective set of "work" habits, (3) analyzing through case studies the methods of dealing with the various aspects of individual pupil progress, (4) applying the principles of the psychology of skills to the teaching of typewriting, and (5) developing improved methods for course construction, selection of instructional materials, and measuring pupil achievement.

Course Offerings

An "S" before a course number denotes that the course is offered in Summer School only. An "S" after a course number indicates a regular course modified for offering during the summer session. A more complete course description may be found in the respective College catalogues.

The University may find it necessary to cancel courses when warranted, due to low enrollment. In general, freshman and sophomore courses will not be maintained for classes smaller than 20. Minimum enrollments for upper level undergraduate courses and graduate courses will be 15 and 10 respectively.

AGRICULTURE

AGRICULTURAL ECONOMICS

A.E. 198. SPECIAL PROBLEMS. (1-2) (2 cr. max.)

Arranged. Concentrated reading and study in some phase or problem in Agricultural Economics. Not for graduate credit. (Staff.)

**A.E. 301. SPECIAL PROBLEMS IN AGRICULTURAL ECONOMICS. (1-2)
(4 cr. max.)**

Arranged. Intensive study and analysis of specific problems in the field of Agricultural Economics, which will provide information in depth in areas of special interest to the student. (Staff.)

A.E. 399. RESEARCH. (1-6)

Arranged. Advanced research in Agricultural Economics. Credit according to work accomplished. (Staff.)

AGRICULTURAL ENGINEERING

AGR. ENGR. 198. SPECIAL PROBLEMS IN FARM MECHANICS. (1-3)

Arranged. Prerequisite, approval of department. Not acceptable for majors in agricultural engineering. Problems assigned in proportion to amount of credit. (Gienger.)

**AGR. ENGR. 301. SPECIAL PROBLEMS IN AGRICULTURAL
ENGINEERING. (1-6)**

Arranged. Work assigned in proportion to amount of credit. (Staff.)

AGR. ENGR. 399. RESEARCH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

AGRICULTURAL AND EXTENSION EDUCATION

AGRICULTURAL AND EXTENSION EDUCATION

R.ED. 170, 171. CONSERVATION OF NATURAL RESOURCES. (3, 3)

June 21-July 30. Arranged; E-103. Fee, \$35.00. Designed primarily for teachers. Study of State's natural resources—soil, water fisheries, wildlife, forests and minerals—and natural resource problems and practices. Extensive field study. First course concentrates on subject matter, second includes methods of teaching conservation. Courses taken concurrently in summer session. (Erickson.)

R.ED. 180, 181. CRITIQUE IN RURAL EDUCATION. (1, 1)

Arranged. Prerequisite, approval of staff. Current problems and trends in rural education. (Staff.)

R.ED. 198. SPECIAL PROBLEMS IN AGRICULTURAL EDUCATION. (1-3)

Arranged. Prerequisite, approval of staff. Credit in accordance with amount of work planned. A course designed for advanced undergraduates for problems in teaching vocational agriculture. (Staff.)

R.ED. 200. RESEARCH METHODS IN RURAL EDUCATION. (2)

June 21-July 30. M.T.Th.F., 9:30; LL-203. The scientific method, problem identification, survey of research literature, preparing research plans, design of studies, experimentation, analysis of data and thesis writing. (Cardozier.)

R.ED. 207, 208. PROBLEMS IN RURAL EDUCATION. (2, 2)

Arranged. Consideration of current problems and topics in rural education. (Staff.)

R.ED. 217. PROGRAM PLANNING AND EVALUATION IN AGRICULTURAL EDUCATION. (2)

July 5-30. Daily, 11:00; Q-131. Analysis of community agricultural education needs, selection and organization of course content, criteria and procedures for evaluating programs. (Addison.)

R.ED. 301. FIELD PROBLEMS IN RURAL EDUCATION. (1-3)

Arranged. Prerequisite, six semester hours of graduate study. Problems accepted depend upon the character of the work of the student and the facilities available for study. Periodic conferences required. Final report must follow accepted pattern for field investigations. (Staff.)

R.ED. 302. SEMINAR IN RURAL EDUCATION. (1)

Arranged. Prerequisite, approval of staff. Problems in the organization, administration and supervision of the several agencies of rural education. Investigations, papers and reports. (Staff.)

R.ED. 399. RESEARCH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

AGRONOMY

AGRON. 198. SPECIAL PROBLEMS IN AGRONOMY. (1)

Arranged. Prerequisites, Agron. 10, 107, 108 or permission of instructor. A detailed study, including a written report of an important problem in agronomy. (Staff.)

AGRICULTURAL AND EXTENSION EDUCATION

AGRON. 208. RESEARCH METHODS. (2)

Arranged. Prerequisite, permission of staff. Development of research viewpoint by detailed study and report on crop research of the Maryland Experiment Station or review of literature on specific phases of problem. (Staff.)

AGRON. 399. RESEARCH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

ANIMAL SCIENCE

AN.SC. S131. SPECIAL TOPICS IN ANIMAL SCIENCE. (1)

Arranged. Prerequisite, permission of instructor. This course is designed primarily for teachers of vocational agriculture and extension service personnel. One primary topic, to be selected mutually by the instructor and students, will be presented each session.

AN.SC. 198. SPECIAL PROBLEMS IN ANIMAL SCIENCE. (1-2) (4 cr. max.)

Arranged. Prerequisite, approval of staff. A course designed for advanced undergraduates in which specific problems relating to animal science will be assigned. Work assigned in proportion to amount of credit. (Staff.)

AN.SC. 263. POULTRY NUTRITION LABORATORY. (2)

One lecture and one laboratory period per week. To acquaint graduate students with common basic nutrition research techniques useful in conducting experiments with poultry. Actual feeding trials with chicks as well as bacteriological and chemical assays will be performed. (Creek.)

AN.SC. 301. SPECIAL PROBLEMS IN ANIMAL SCIENCE. (1-2) (4 cr. max.)

Arranged. Prerequisite, approval of staff. Work assigned in proportion to amount of credit. Problems will be assigned which relate specifically to the character of work the student is pursuing.

AN.SC. 399. RESEARCH. (1-12)

Arranged. Students will be required to pursue original research in some phase of animal science, carrying the same to completion, and report the results in the form of a thesis. Work assigned in proportion to amount of credit.

BOTANY

BOT. 1. GENERAL BOTANY. (4)

June 21-Aug. 13. Lectures M.T.Th.F., 8-8:50 A.M., A-1. Laboratory periods: Sec. 1—M.T.Th.F., 9-10:50; Sec. 2 M.T.Th.F., 11:00-12:50, E-212. Sec. 3 M.T.Th.F., 9-10:50; Sec. 4 M.T.Th.F., 12:30-2:20, E-236. Laboratory fees. \$6.00. General introduction to botany. Emphasis on the fundamental biological principles of the higher plants. (Rappleye, Assistants.)

BOT. 136. PLANTS AND MANKIND. (2)

June 21-Aug. 13. Lectures M.T.Th.F., 1-1:50, E-116. Prerequisite, Botany 1 or equivalent. A survey of the plants which are utilized by man, the diversity of their utilization, and their historic and economic significance. Open only to participants in the N.S.F. Institute. (Rappleye.)

BOTANY

BOT. 151-S. TEACHING METHODS IN BOTANY. (2)

June 21-Aug. 13. Lecture-laboratory periods; M.T.Th.F., 1-2:50, E-212. Prerequisite, Bot. 1, or equivalent. Laboratory fee, \$5.00. A study of the biological principles of common plants, and demonstrations, projects, and visual aids suitable for teaching in primary and secondary schools. Open only to participants in the N.S.F. Institute. (Lockard.)

BOT. 195. TUTORIAL READINGS IN BOTANY (HONORS COURSE). (2 or 3)

Prerequisite, admission to the Department of Botany Honors Program. A review of the literature dealing with a specific research problem in preparation for original research to be accomplished in Botany 196. Papers will be assigned and discussed in frequent sessions with the instructor.

BOT. 196. RESEARCH PROBLEMS IN BOTANY (HONORS COURSE). (2 or 3)

Prerequisite, Bot. 195. Laboratory fee, \$10.00. The candidate for Honors will pursue a research problem under the direction and close supervision of a member of the faculty.

BOT. 199-S. NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTE FOR TEACHERS OF BIOLOGY SEMINAR. (2)

June 21-Aug. 13. Two-hour sessions, morning and afternoon, or all day visitation on Wednesdays. Includes lectures, discussions, laboratory demonstrations and visitations in the fields of the biological sciences, especially designed for high school teachers and open only to participants in the National Science Foundation Institute. Student participation will be encouraged. Laboratory fee, \$5.00. (Lockard.)

BOT. 399. RESEARCH. (1-6)

Arranged. Credit according to work done. (Staff.)

ENTOMOLOGY

ENT. S-121. ENTOMOLOGY FOR SCIENCE TEACHERS. (4)

June 21-Aug. 13. Lectures M.T.Th.F., 8:00-8:50; O-101. Laboratory periods, M.T.Th.F., 9:00-10:50; O-200. This course will include the elements of morphology, taxonomy and biology of insects using examples commonly available to high school teachers. It will include practice in collecting, preserving, rearing and experimenting with insects. Laboratory fee, \$3.00. Open only to participants in the N.S.F. Institute. (Messersmith.)

ENT. 198. SPECIAL PROBLEMS. (1-3)

Arranged. Credit and prerequisites determined by the department. Investigation of assigned entomological problems. (Staff.)

ENT. 301. ADVANCED ENTOMOLOGY.

Arranged. Credit and prerequisite determined by the department. Independent studies of selected entomological problems with appropriate supervision. (Staff.)

ENT. 399. RESEARCH. (1-6)

Thesis research. Arranged. Credit according to work accomplished. (Staff.)

*HORTICULTURE***HORT. 62. PLANT PROPAGATION. (3)**

June 21-July 30. M.T.Th.F., 1:00-2:20, F-103. Laboratory, W., 1:00-3:30.
Prerequisite, Bot. 1. A study of principles and practices of propagation of horticultural plants. (Link.)

HORT. 198. SPECIAL PROBLEMS. (2-4)

Arranged. For major students in horticulture or botany. Credit according to work accomplished. Four credits maximum.

HORT. 399. ADVANCED HORTICULTURAL RESEARCH. (2-12)

Arranged. Credit according to work accomplished.

ARTS AND SCIENCES*ART***ART 1. BASIC DRAWING. (3)**

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; A-307.

Drawing preparatory to life and portrait drawing and painting. Stress is placed on fundamental principles, such as the study of relative proportions, values, modeling, etc. (O'Connell.)

ART 5. BASIC DESIGN. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; A-7.

A basic course in design for beginners consisting of the theory and practice of design. Theory of design deals with design elements such as line, shape, form, etc., and design principles such as contrast, balance, rhythm, etc. Design practice consists of working with pencil, pen, water color, casein, and other media in terms of organization, representation and space. (Freeny.)

ART 11. HISTORY OF ART. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-302.

Designed to continue the survey begun in Art 9. The course is concerned with the development of painting, sculpture, and architecture from the Renaissance to the present day. (Grubar.)

ART 13. ELEMENTARY SCULPTURE. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; A-7.

Study of three-dimensional composition in round and bas-relief. Mediums used: clay, plasteline, wood, plaster, stone. Lab fee, \$15.00. (Freeny.)

ART. 14. ELEMENTARY SCULPTURE. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; A-7.

Study of three-dimensional compositions in round and bas-relief. Mediums used: clay, plasteline, plaster, wood, stone. Lab fee, \$15.00. (Freeny.)

ART 15. FUNDAMENTALS OF ART. (3)

June 21-July 30. Daily, 9:30-10:50; A-306.

Two three-hour laboratory periods per week. This course emphasizes the fundamental principles of the creative visual arts for those wishing to teach. It includes elements and principles of design, perspective, and theory of color. Studio practice is given in the use and application of different media. (Lembach.)

CHEMISTRY

ART 20. ART APPRECIATION. (2)

June 21-July 30. M.T.Th.F., 8:00-9:20; A-303.

An introduction to the technical and aesthetic problems of the artist. The student becomes acquainted with the elements that go into a work of the visual arts. He is made aware of the underlying structure that results in the "wholeness" of an art work. He will see examples (originals and reproductions) of master-pieces of art. (Lembach.)

ART 109. MODERN ART. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; A-303.

A survey of the developments in various schools of modern art. Works of art analyzed according to their intrinsic values and in their historical background. Collections of Washington and Baltimore are utilized. (Grubar.)

ART 110. PRINT MAKING. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-7.

Basic experiences in the various print making media: woodcut, etching, and lithography. Emphasis on a demonstrated understanding of the means of making fine prints. Lab fee, \$20.00. (O'Connell.)

ART 111. PRINT MAKING. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-7.

Development in depth of not more than two print making media leading to a demonstrated capability with the techniques as means of making fine prints. Lab fee, \$20.00. (O'Connell.)

ART 190, 191. SPECIAL PROBLEMS IN ART. (2 OR 3, 2 OR 3)

Arranged. Two three-hour laboratory periods per week, or equivalent work in art history and appreciation. Permission of department head. Designed to offer the advanced art student special instruction in areas not offered regularly by the department. (Staff.)

CHEMISTRY

All laboratory courses in chemistry (except Chem. 214—\$20.00) carry a laboratory fee of \$12.00; in addition the student is charged for any apparatus which cannot be returned to the stock room in perfect condition.

CHEM. 1. GENERAL CHEMISTRY. (4)

June 21-Aug. 13. M.T.Th.F. Four lectures and four three-hour laboratory periods per week. Lecture, 11:00; C-132. Laboratory, 1:00, 2:00, 3:00; C-119, C-120. Prerequisite, 1 year high school algebra or equivalent. (McFarlane.)

CHEM. 3. GENERAL CHEMISTRY. (4)

June 21-Aug. 13. M.T.Th.F. Four lectures and four three-hour laboratory periods per week. Lecture, 11:00; C-130. Laboratory, 1:00, 2:00, 3:00; C-105, C-117, C-118. Prerequisite, Chem. 1. (Jaquith.)

CHEM. 19. ELEMENTS OF QUANTITATIVE ANALYSIS. (4)

June 21-Aug. 13. M.T.Th.F. Lecture 12:30-1:20; C-132. Laboratory, 8:00, 9:00, 10:00; C-306. Prerequisite, Chem. 3. Four lectures and four laboratory periods per week. (Stuntz.)

CHEM. 37. ELEMENTARY ORGANIC CHEMISTRY. (2)

June 21-Aug. 13. M.T.Th.F. Four lectures per week, 8:00; C-134. Prerequisite, Chem. 35. (Henery-Logan.)

CHEM. 38. ELEMENTARY ORGANIC LABORATORY. (2)

June 21-Aug. 13. M.T.Th.F. Four three-hour laboratory periods per week. 9:00, 10:00, 11:00; C-221. Prerequisite, Chem. 36. (Henery-Logan.)

CHEM. 192, 194. GLASSBLOWING LABORATORY. (1, 1)

June 21-July 30. Two four-hour laboratory periods a week. M.W. 1:00, 2:00, 3:00, 4:00; C-B3. (Carruthers.)

CHEM. 399. RESEARCH.

Arranged. Credit according to work accomplished. (Staff.)

CLASSICAL LANGUAGES AND LITERATURES**LATIN 102. TACITUS. (3)**

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; LL-1. Lectures and readings on Greek and Roman historiography before Tacitus and on the author as a writer of history. The reading of selections from the Annals and Histories. Reports. (Avery.)

ENGLISH**ENG. 1. COMPOSITION AND AMERICAN LITERATURE. (3, 3)**

June 21-Aug. 13. (Herman, Staff.)

Section 1—M.T.Th.F., 8:00- 9:20; A-18

Section 2—M.T.Th.F., 9:30-10:50; A-18

Section 3—M.T.Th.F., 9:30-10:50, A-8

Section 4—M.T.Th.F., 11:00-12:20; A-18

ENG. 3, 4. COMPOSITION AND WORLD LITERATURE. (3, 3)

Prerequisite, Eng. 1 or 21. June 21-Aug. 13. (Cooley, Staff.)

ENG. 3—

Section 1—M.T.Th.F., 8:00- 9:20; A-49

Section 2—M.T.Th.F., 8:00- 9:20; A-17

Section 3—M.T.Th.F., 9:30-10:50; A-49

Section 4—M.T.Th.F., 9:30-10:50; A-17

Section 5—M.T.Th.F., 9:30-10:50; A-159

Section 6—M.T.Th.F., 11:00-12:20; A-49

Section 7—M.T.Th.F., 11:00-12:20; A-17

ENG. 4—

Section 1—M.T.Th.F., 8:00- 9:20; A-104

Section 2—M.T.Th.F., 8:00- 9:20; A-106

Section 3—M.T.Th.F., 9:30-10:50; A-104

Section 4—M.T.Th.F., 9:30-10:50; A-106

Section 5—M.T.Th.F., 9:30-10:50; A-163

Section 6—M.T.Th.F., 11:00-12:20; A-104

Section 7—M.T.Th.F., 11:00-12:20; A-106

ENGLISH

ENG. 8. COLLEGE GRAMMAR. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-14. Prerequisite, Eng. 1 or 21. A brief review of the traditional description of English grammar followed by an expanded introduction to modern structural grammar, including phonology, morphology, and syntax. (James.)

ENG. 101. HISTORY OF THE ENGLISH LANGUAGE. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; A-14. Prerequisite, Eng. 4 or equivalent. (James.)

ENG. 104. CHAUCER. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-110. Prerequisite, Eng. 4 or equivalent. The Canterbury Tales, Troilus and Criseyde, and the principal minor poems. (Cooley)

ENG. 115. SHAKESPEARE. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-12. Prerequisite, Eng. 4 or equivalent. Outstanding plays to Shakespeare's mid-career. (Zeeveld.)

ENG. 116. SHAKESPEARE. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; A-12. Prerequisite, Eng. 4 or equivalent. The Roman history plays, the great tragedies, and the dramatic romances. (Zeeveld.)

ENG. 121. MILTON. (3)

June 2-Aug. 13. M.T.Th.F., 9:30-10:50; A-209. Prerequisite, Eng. 4 or equivalent. (Mish.)

ENG. 129. LITERATURE OF THE ROMANTIC PERIOD. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-164. Prerequisite, Eng. 4 or equivalent. Emphasizes Wordsworth, Coleridge, and Byron. (Howard.)

ENG. 139. THE ENGLISH NOVEL. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; A-159. Prerequisite, Eng. 4 or equivalent. Six major eighteenth century writers. (Ward.)

ENG. 145. THE MODERN NOVEL. (3)

June 21-July 30. Daily, 8:00-9:20; A-12. Prerequisite, Eng. 4 or equivalent.

A study of some major American, British, and Continental novelists of the twentieth century. (Portz.)

ENG. 150. AMERICAN LITERATURE. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; A-110. Prerequisite, Eng. 4 or equivalent. American prose and poetry to 1850. (Gravely.)

ENG. 151. AMERICAN LITERATURE. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; A-110. Prerequisite, Eng. 4 or equivalent. American prose and poetry since 1850. (Hovey.)

ENG. 156. MAJOR AMERICAN WRITERS. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; A-164. Prerequisite, Eng. 4 or equivalent. Twain and Hemingway. (Lutwack.)

FOREIGN LANGUAGES

- ENG. 157. INTRODUCTION TO FOLKLORE. (3)**
 June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A-167. Prerequisite, Eng. 4 or equivalent. Historical background of folklore studies; types of folklore with particular emphasis on folktales and folksongs, and on American folklore. (Birdsall.)
- ENG. 160. ADVANCED EXPOSITORY WRITING. (3)**
 June 21-Aug. 13. Prerequisite, Eng. 4 or equivalent.
 Section 1—M.T.Th.F., 8:00-9:20; A-170. (Myers.)
 Section 2—M.T.Th.F., 11:00-12:20; A-170. (Birdsall.)
- ENG. 201. BIBLIOGRAPHY AND METHODS. (3)**
 June 21-Aug. 13. T.F., 2:00-4:00; A-170. An introduction to the principles and methods of research. (Mish.)
- ENG. 212. SEMINAR IN EIGHTEENTH CENTURY LITERATURE. (3)**
 June 21-Aug. 13. T.F., 1:30-3:30; A-165. (Myers.)
- ENG. 225. SEMINAR IN AMERICAN LITERATURE. (3)**
 June 21-Aug. 13. M.Th., 7:00-9:00 P.M.; A-170. Literary techniques in the novel. (Lutwack.)
- ENG. 230. SPECIAL STUDIES IN ENGLISH LITERATURE. (3)**
 June 21-Aug. 13. M.Th., 7:00-9:00 P.M.; A-170. Literary techniques in renaissance literature. Reading list may be requested in advance. (Cooley.)
- ENG. 399. RESEARCH. (1-6)**
 Arranged. Credit according to work accomplished.

FOREIGN LANGUAGES

- FRENCH 0. ELEMENTARY FRENCH FOR GRADUATE STUDENTS. (Audit)**
 June 21-July 30. Daily, 8:00-9:20; LL-2. (Demaitre.)
- FRENCH 1-2. ELEMENTARY FRENCH. (3, 3)**
 French 1, June 21-July 16, French 2, July 19-Aug. 13. Registration for both French 1 and French 2 on June 21. Register for French 1 and French 2 on separate class cards.
 Note: This course meets *three* times daily, 8:00-9:20 and 12:30 to 1:50, LL-4, with an additional 50 minute drill daily. Students enrolled in French 1 and/or French 2 may not take other courses in the summer session. (Cap.)
- FRENCH 6. INTERMEDIATE FRENCH. (3)**
 June 21-July 30. Daily, 9:30 to 10:50, LL-106. (Demaitre.)
- FRENCH 7. INTERMEDIATE FRENCH. (3)**
 June 21-July 30. Daily, 9:30 to 10:50, LL-105. (Zimmerman.)
- FRENCH 131. FRENCH LITERATURE OF THE 19TH CENTURY.**
 June 21-July 30. Daily, 11-12:20; LL-220. (Zimmerman.)

FOREIGN LANGUAGES

GERMAN 0. ELEMENTARY GERMAN FOR GRADUATE STUDENTS. (Audit)

June 21-July 30, Section 1, Daily 8:00-9:20; LL-13. Section 2, daily, 9:30-10:50, LL-13. (Miller, Sonntag.)

GERMAN 1-2. ELEMENTARY GERMAN. (3, 3)

German 1, June 21-July 16, German 2, July 19-Aug. 13. Registration for both German 1 and German 2 on June 21. Register for German 1 and German 2 on separate class cards.

Note: This course meets three times daily, 8:00-9:20 and 12:30 to 1:50, LL-205, with an additional 50 minute drill daily. Students enrolled in German 1 and/or German 2 may not take other courses in the summer session. (Hering.)

GERMAN 6. INTERMEDIATE LITERARY GERMAN. (3)

June 21-July 30. Daily, 11:00-12:20, LL-201. (Kemner.)

GERMAN 7. INTERMEDIATE LITERARY GERMAN. (3)

Daily, 11:00-12:20, LL-203. (Sonntag.)

GERMAN 9. CONVERSATION AND COMPOSITION. (3)

Daily, 8:00-9:20, LL-1. Prerequisite, German 7 or 6 with consent of instructor. (Kemner.)

SPANISH 1-2. ELEMENTARY SPANISH. (3, 3)

Spanish 1, June 21-July 16, Spanish 2, July 19-Aug. 13. Registration for both Spanish 1 and Spanish 2 on June 21. Register for Spanish 1 and Spanish 2 on separate class cards.

Note: This course meets three times daily, 8:00-9:20 and 12:30-1:50, LL-301, with an additional 50 minutes drill daily. Students enrolled in Spanish 1 and/or Spanish 2 may not take other courses in the summer session. (Herdoiza.)

SPANISH 6. INTERMEDIATE SPANISH. (3)

June 21-July 30. Daily, 9:30-10:50, LL-319. (Moncayo.)

SPANISH 7. INTERMEDIATE SPANISH. (3)

June 21-July 30. Daily, 9:30-10:50, LL-116. (Salgado.)

SPANISH 161. SPANISH AMERICAN FICTION. (3)

June 21-July 30. Daily, 9:30-10:50, LL-2. Conducted in Spanish. Prerequisite, Spanish 75 or 77. (Rovner.)

CHINESE 1-2. ELEMENTARY CHINESE. (3, 3)

Chinese 1, June 21-July 16, Chinese 2, July 19-Aug. 13. Registration for both Chinese 1 and Chinese 2 on June 21. Register for Chinese 1 and Chinese 2 on separate class cards.

Note: This course meets *three* times daily, 8:00-9:20 and 11:00-11:50, LL-3, with an additional 50 minute drill daily. Students enrolled in Chinese 1 and/or Chinese 2 may not take other courses in the summer session. (Chen.)

CHINESE 6. INTERMEDIATE CHINESE. (3)

June 21-July 30. Daily, 9:30-10:50, LL-301. (Staff.)

RUSSIAN 1-2. ELEMENTARY RUSSIAN. (3, 3)

Russian 1, June 21-July 16, Russian 2, July 19-Aug. 13. Registration for both Russian 1 and Russian 2 on June 21. Register for both Russian 1 and Russian 2 on separate class cards.

Note: This course meets *three* times daily, 9:30-10:50, and 12:30-1:20, LL-104, with an additional 50 minutes drill daily. Students enrolled in Russian 1 and Russian 2 may not take other courses in the summer session.
(Zinovieff.)

RUSSIAN 6-7. INTERMEDIATE RUSSIAN. (3, 3)

Russian 6, June 21-July 16, Russian 7, July 19-Aug. 13. Registration for both Russian 6 and Russian 7 on June 21. Register for both Russian 6 and Russian 7 on separate class cards.

Note: This course meets daily twice, 9:30-10:50 and 12:30-1:20, LL-220. Students enrolled in Russian 6 and/or Russian 7 may not take other courses in the summer session.
(Hitchcock.)

HISTORY**H. 5. HISTORY OF AMERICAN CIVILIZATION. (3)**

June 21-Aug. 13.

Section 1— 8:00- 9:20; A-130 (Staff.)

Section 2— 8:00- 9:20; A-207 (Staff.)

Section 3— 9:30-10:50; A-130 (Staff.)

Section 4— 9:30-10:50; A-207 (Staff.)

Section 5—11:00-12:20; A-130 (Van Ness.)

H. 6. HISTORY OF AMERICAN CIVILIZATION. (3)

June 21-Aug. 13.

Section 1— 8:00- 9:20; A-16 (Weinstein.)

Section 2— 9:30-10:50; A-228 (Staff.)

Section 3— 9:30-10:50; A-16 (Weinstein.)

Section 4—11:00-12:20; A-16 (Staff.)

H. 41. WESTERN CIVILIZATION. (3)

June 21-Aug. 13. This course is designed to give the student an appreciation of the civilization in which he lives in its broadest setting. The study begins with the collapse of classical civilization and comes to the seventeenth century.

Section 1— 8:00- 9:20; A-209 (Staff.)

Section 2— 9:30-10:50; A-231 (Staff.)

Section 3—11:00-12:20; A-207 (Staff.)

H. 42. WESTERN CIVILIZATION. (3)

June 21-Aug. 13. This course is designed to give the student an appreciation of the civilization in which he lives in its broadest setting. The study begins with the seventeenth century and comes to the present.

Section 1— 8:00- 9:20; A-228 (Staff.)

Section 2— 9:30-10:50; A-259 (Staff.)

Section 3—11:00-12:20; A-209 (Staff.)

Hi. 62. FAR EASTERN CIVILIZATION. (3, 3)

June 21-Aug. 13. 8:00-9:20; A-231. This course seeks to give the student an understanding of a great civilization radically different from our own and an

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appreciation of the complex problems of the Far East and of American policy there. The approach is interdisciplinary with an historical framework.

(Folsom.)

H. 114. THE MIDDLE PERIOD OF AMERICAN HISTORY, 1824-1860. (3)

June 21-Aug. 13. 8:00-9:20; A-259. Prerequisite, H. 5, 6 or the equivalent. An examination of the political history of the U.S. from Jackson to Lincoln with particular emphasis on the factors producing Jacksonian democracy, Manifest Destiny, and the Whig Party, the anti-slavery movement, the Republican Party and secession.

(Gatell.)

H. 118. RECENT AMERICAN HISTORY. (3)

June 21-Aug. 13. 11:00-12:20; A-231. Prerequisite, H. 5, 6, or the equivalent. Party politics, domestic issues, foreign relations of the United States since 1890. First semester, through World War I. Second semester, since World War I.

(Staff.)

H. 134. THE HISTORY OF IDEAS IN AMERICA. (3, 3)

June 21-Aug. 13. 9:30-10:50; A-133. A history of basic beliefs about religion, man, nature, and society. Consent of the instructor is required for H. 134.

(Staff.)

H. 155. HISTORY OF MEDIEVAL EUROPE. (3, 3)

June 21-Aug. 13. 11:00-12:20; A-228. A study of medieval government, society, and thought from the collapse of classical civilization to the Renaissance.

(Robertson.)

H. 164. HISTORY OF THE BRITISH EMPIRE (3, 3)

June 21-Aug. 13. 8:00-9:20; A-133. Prerequisite, H. 41, 42, or 53, 54. First semester, the development of England's Mercantilist Empire and its fall in the war for American Independence (1783). Second semester, the rise of the Second British Empire and the solution of the problems of responsible self-government (1783-1867), the evolution of the British Empire into a Commonwealth of nations, and the development and problems of the dependent Empire.

(Gordon.)

H. 171. EUROPE IN THE WORLD SETTING OF THE TWENTIETH CENTURY. (3, 3)

June 21-Aug. 13. 9:30-10:50; A-161. Prerequisites, H. 11, 42 or H. 53, 54. A study of political, economic, and cultural developments in twentieth century Europe with special emphasis on the factors involved in the two World Wars and their global impacts and significance.

(Staff.)

H. 189. HISTORY OF JAPAN. (3)

June 21-Aug. 13. 9:30-10:50; A-166. A history of Japan from earliest to modern times. Emphasis is placed on the evolution of institutions and thought.

(Folsom.)

H. 300. HISTORIOGRAPHY: TECHNIQUES OF HISTORICAL RESEARCH AND WRITING. (3)

June 21-Aug. 13. An introduction to the professional study of history, including an examination of the sources and nature of historical knowledge, historical criticism, and synthesis. Required of all candidates for advanced degrees in history.

Section 1—Arranged

(Robertson.)

Section 2—Arranged

(Staff.)

MATHEMATICS

- H. 315. READINGS IN THE MIDDLE PERIOD AND CIVIL WAR. (3)
Arranged. Readings in the standard works and monographs pertaining to the middle period and civil war. (Gatell)
- H. 324. SEMINAR IN RECENT AMERICAN HISTORY. (3)
Arranged. Emphasis will be placed on the period since 1900. (Staff.)
- H. 363. READINGS IN THE HISTORY OF GREAT BRITAIN AND THE BRITISH EMPIRE-COMMONWEALTH. (3)
Arranged. Readings in the standard works and monographs pertaining to the history of Great Britain and the British empire-commonwealth. (Gordon.)
- H. 371. SEMINAR IN THE HISTORY OF WORLD WAR I. (3)
Arranged. Investigation of various aspects of the First World War including military operations, diplomatic phases, and political and economic problems of the war and its aftermath. (Staff.)
- H. 399. RESEARCH. (1-6)
Arranged. Credit according to work accomplished.

MATHEMATICS

MATH. 3. FUNDAMENTALS OF MATHEMATICS. (4)

June 21-Aug. 13; Daily, 9:30-10:50; Y-27. This course, open to all students, is designed to provide an introduction to mathematical thinking and to develop an appreciation of the role of mathematics in human culture. (Staff.)

MATH. 10. INTRODUCTION TO MATHEMATICS. (3)

Prerequisite, 2½ years of college preparatory mathematics or Math. 1. Open to students not majoring in mathematics or the physical and engineering sciences. Logic, sets, counting, probability; elementary algebraic and transcendental functions and their geometric representation; systems of linear equations, vectors, matrices.

- Section 1—June 21-Aug. 13; M.T.Th.F., 8:00- 9:20; Y-5 (Staff.)
Section 2—June 21-Aug. 13; M.T.Th.F., 9:30-10:50; Y-3 (Staff.)
Section 3—June 21-Aug. 13; M.T.Th.F., 9:30-10:50; Y-15 (Staff.)
Section 4—June 21-Aug. 13; M.T.Th.F., 11:00-12:20; Y-16 (Staff.)

MATH. 11. INTRODUCTION TO MATHEMATICS. (3)

Prerequisite, Math. 10. Math. 11 is a continuation of Math. 10.

- Section 1—June 21-Aug. 13; M.T.Th.F., 8:00- 9:20; Y-2 (Staff.)
Section 2—June 21-Aug. 13; M.T.Th.F., 9:30-10:50; Y-16 (Staff.)
Section 3—June 21-Aug. 13; M.T.Th.F., 11:00-12:20; Y-5 (Staff.)
Section 4—June 21-Aug. 13; M.T.Th.F., 9:30-10:50; Y-28 (Staff.)

MATH. 18. INTRODUCTORY ANALYSIS. (3)

Prerequisite, 2½ years of college preparatory mathematics or Math. 1. An introductory course for students not qualified to start Math. 19. Real numbers, functions, coordinate systems. Trigonometric functions. Plane analytic geometry.

- Section 1—June 21-Aug. 13; M.T.Th.F., 8:00- 9:20; Y-4 (Staff.)
Section 2—June 21-Aug. 13; M.T.Th.F., 11:00-12:20; Y-4 (Staff.)

MATHEMATICS

MATH. 19. ELEMENTARY ANALYSIS. (4)

Prerequisite, $3\frac{1}{2}$ years of college preparatory mathematics or Math. 18. Vectors and analytic geometry in three dimensions. Review of real numbers, coordinate systems, trigonometric functions, determinants.

Section 1—June 21-Aug. 13; Daily, 9:30-10:50; Y-14 (Staff.)

Section 2—June 21-Aug. 13; Daily, 9:30-10:50; Y-121 (Staff.)

Section 3—June 21-Aug. 13; Daily, 9:30-10:50; Y-17 (Staff.)

MATH. 20. CALCULUS I. (4)

Prerequisite, Math. 19 or equivalent.

Section 1—June 21-Aug. 13; Daily, 8:00-9:20; Y-16 (Staff.)

Section 2—June 21-Aug. 13; Daily, 8:00-9:20; Y-15 (Staff.)

Section 3—June 21-Aug. 13; Daily, 8:00-9:20; Y-17 (Staff.)

MATH. 21. CALCULUS II. (4)

Prerequisite, Math. 20 or equivalent.

Section 1—June 21-Aug. 13; Daily, 9:30-10:50; Y-4 (Staff.)

Section 2—June 21-Aug. 13; Daily, 9:30-10:50; Y-5 (Staff.)

MATH. 22. CALCULUS III. (4)

Prerequisite, Math. 21 or equivalent. Basic concepts of linear algebra, matrices, and determinants. Calculus of functions of vectors. Implicit function theorem. Surface integrals. Classical theorems of Green, Gauss, and Stokes.

June 21-Aug. 13; Daily, 11-12:20; Y-18 (Staff.)

MATH. 30. ELEMENTS OF MATHEMATICS. (4)

Prerequisite, high school elementary algebra. Required course in mathematics for elementary education majors and open only to students in this field. Topics from algebra and number theory are presented to provide a proper mathematical insight into arithmetic for the prospective elementary school teacher.

Section 1—June 21-Aug. 13; 8:00-9:20; Y-18 (Staff.)

Section 2—June 21-Aug. 13; 9:30-10:50; Y-18 (Staff.)

MATH. 31. ELEMENTS OF GEOMETRY. (4)

June 21-Aug. 13; Daily, 11:00-12:20; Y-2 (Staff.)

Prerequisite, Math. 30 or equivalent. Required course in mathematics for elementary education majors and open only to students in this field. Topics included are: review of the structure of a mathematical system, algebra of sets, non-metric geometry, logic, congruence, measurement, similarity, graphs on a plane, a miniature geometry, spherical geometry.

MATH. 64. DIFFERENTIAL EQUATIONS FOR ENGINEERS. (3)

Prerequisite, Math. 21 or equivalent.

June 21-Aug. 13; M.T.Th.F., 9:30-10:50; Y-2 (Staff.)

MATH. 100. VECTORS AND MATRICES. (3)

Prerequisite, Math. 21 or Math. 15.

June 21-Aug. 13; M.T.Th.F., 8:00-9:20; Y-3 (Staff.)

MATH. 112. INFINITE PROCESSES. (3)

Prerequisite, Math. 21 or equivalent. Construction of the real number system. Sequences and Series. Power series, Fourier series, divergent series, extension of the theory to complex numbers and functions.

June 21-Aug. 13; M.T.Th.F., 11-12:20; Y-121 (Staff.)

MATH. 124. INTRODUCTION TO PROJECTIVE GEOMETRY. (3)

Prerequisite, Math. 21 or equivalent. Elementary projective geometry combining synthetic and algebraic approaches.
 June 21-Aug. 13; M.T.Th.F., 9:30-10:50; Y-122 (Staff.)

MATH. 181. INTRODUCTION TO NUMBER THEORY. (3)

June 21-July 30. Daily, 8:00-9:20; U-112 (Cole.)
 Open only to participants in the N.S.F. Institute in Mathematics for Elementary School Teachers.

MATH. 182. INTRODUCTION TO ALGEBRA. (3)

Prerequisite, one year of college mathematics or consent of instructor. Not open to students seeking a major directly in the physical sciences. Modern ideas in algebra and topics in the theory of equations. Section 1—(Open only to participants in the N.S.F. Institute in Mathematics for Junior High School Teachers in Mathematics.)
 June 21-July 30; Daily, 1-2:20; Q-130 (Henkelman, Staff.)
 Section 2—June 21-Aug. 13; M.T.Th.F., 2:40-4; Q-130 (Staff.)

MATH. 183. INTRODUCTION TO GEOMETRY. (3)

June 21-July 30. Daily, 1:00-2:20; C-134 (Good.)
 Open only to participants in the N.S.F. Institute in Mathematics for Elementary School Teachers.

MATH. 189. NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTE FOR TEACHERS OF SCIENCE AND MATHEMATICS SEMINAR. (3)

Open only to participants in the N.S.F. Institute in Mathematics for Junior High School Teachers in Mathematics.
 June 21-July 30; Daily, 9:30-10:50; Y-101 (Henkelman, Staff.)

MICROBIOLOGY

MICROB. 1. GENERAL MICROBIOLOGY. (4)

June 21-Aug. 13. Four lectures and four two-hour laboratory periods a week. Lecture, 8:00; F-101. Laboratory, 9:00, 10:00, M.T.Th.F.; T-210. Laboratory fee, \$15.00. The physiology, culture, and differentiation of bacteria. Fundamental principles of Microbiology in relation to man and his environment.
 (Hetrick.)

MICROB. 181. MICROBIOLOGICAL PROBLEMS. (3)

Arranged. Six two-hour laboratory periods a week. Prerequisite, 16 credits in Microbiology. Registration only upon consent of the instructor. Laboratory fee, \$15.00. (Faber.)

MICROB. 399. RESEARCH.

Arranged. Credits according to work accomplished. Laboratory fee, \$15.00. (Staff.)

MUSIC *

MUSIC 8. THEORY OF MUSIC. (3)

June 21-Aug. 13. Daily, 9:30-10:50; M.W.F., 11:00-12:20; NN-208. Prerequisite Music 7. A fundamental course in the elements of Music. Study of rhythms, scales, chordal structures, and tonalities through ear training, sight-singing, and keyboard drill.
 (Payerle.)

* (for Music Education, see page 62)

MUSIC

MUSIC 10. BAND. (1)

June 21-July 30. Daily, 12:30-1:50; NN-116. Open to any student who can qualify. In the summer of 1965 the sessions will be devoted to reading new band literature. (Henderson, Ostling.)

MUSIC 16. FUNDAMENTALS FOR THE CLASSROOM TEACHER. (3)

June 21-July 30. Daily, 8:00-9:20; NN-202. The fundamentals of music theory and practice, related to the needs of the classroom and kindergarten teacher, and organized in accord with the six-area concept of music learning. (Fanos.)

MUSIC 20. SURVEY OF MUSIC LITERATURE. (3)

June 21-July 30. Daily, 9:30-10:50; NN-359. Open to all students except music and music education majors, and may be taken to satisfy the fine arts option in the general education program. A study of musical principles and an introduction to musical repertoires. Beginning course. (Berman.)

MUSIC 166. SURVEY OF THE OPERA. (3)

June 21-July 30. Daily, 8:00-9:20; NN-304. Prerequisites, Music 120, 121 or the equivalent. A study of the music, librettos, and composers of the standard operas. (Bernstein.)

MUSIC 167. SYMPHONIC MUSIC. (3)

June 21-July 30. Daily, 12:30-1:50; NN-202. Prerequisites, Music 120, 121, or the equivalent. Orchestral music from the Baroque period to the present. (McCorkle.)

MUSIC 201. SEMINAR IN MUSICOLOGY: MOZART. (3)

June 21-July 30. Daily, 9:30-10:50 NN 301. Prerequisites, Music 120, 121 and graduate standing. In the 1965 summer session the music of Mozart will be studied. (McCorkle.)

MUSIC 203. SEMINAR IN MUSICOLOGY: PERFORMANCE PRACTICES. (3)

June 21-July 30. Daily 12:30-1:50 NN 304. Prerequisites, Music 120, 121 and graduate standing. In the 1965 summer session the history of performance practices will be studied. (Bernstein.)

MUSIC 207. THE CONTEMPORARY IDIOM. (3)

June 21-July 30. Daily, 11:00-12:20. NN 301. Prerequisites, Music 144 or the equivalent, and graduate standing. Analysis of twentieth-century styles. (Berman.)

MUSIC 212-213. INTERPRETATION, PERFORMANCE, AND ANALYSIS OF THE STANDARD REPERTOIRE. (2, 2)

June 21-August 13. Hours arranged; NN-201. A seminar in analysis and interpretation for the graduate performer, with advanced instruction at the instrument. Supplementary fee of \$40.00 for each course. (Heim, Staff.)

APPLIED MUSIC

June 21-Aug. 13. Arranged. A student taking applied music for the first time at this University should register for Music X. He will receive the proper classification at the end of the summer session.

MUSIC

Every student taking an applied music course should, in addition to registering for the proper course number, indicate the instrument chosen by adding a section number as follows:

Sec. 1, Piano	Sec. 7, Flute	Sec. 12, Trumpet
Sec. 2, Voice	Sec. 9, Clarinet	Sec. 13, Trombone
Sec. 3, Violin	Sec. 11, Horn	Sec. 16, Organ

MUSIC 12, 13, 52, 53, 112, 113, 152, 153. APPLIED MUSIC. (2 each course)

June 21-August 13. Hours to be arranged with instructor on first day of classes, NN 201. Prerequisite, the next lower course in the same instrument. Two one-hour lessons and a minimum of twelve practice hours per week for eight weeks. Supplementary fee of \$40.00 for each course. (Staff.)

PHILOSOPHY

PHIL. 1. INTRODUCTION TO PHILOSOPHY. (3)

An introduction to some of the main problems of philosophy, and to some of the main ways of dealing with these problems. June 21-August 13. 9:30-10:50; LL-302. (Celarier.)

PHIL. 41. ELEMENTARY LOGIC AND SEMANTICS. (3)

An introductory study of logic and language, intended to help the student increase his ability to employ language with understanding and to reason correctly. Topics treated include: the uses and abuses of language, techniques for making sound inferences, and the logic of science. June 21-August 13. 11:00-12:20; LL-302. (Celarier.)

PHIL. 145. ETHICAL THEORY. (3)

Prerequisite, Phil. 1 or 45. Contemporary problems having to do with the meanings of the principal concepts of ethics and with the nature of moral reasoning. June 21-August 13. 9:30-10:50; LL-204. (Van Iten.)

PHIL. 292. SELECTED PROBLEMS IN PHILOSOPHY. (1-3)

Arranged. Prerequisite, consent of the instructor. Credit according to work accomplished. (Staff.)

PHIL. 399. RESEARCH IN PHILOSOPHY. (1-3)

Arranged. Credit according to work accomplished. (Staff.)

PHYSICS AND ASTRONOMY

ASTR. 1. INTRODUCTION TO ASTRONOMY. (3)

June 21-July 30. Lecture, M.T.W., 7:30-9:00 P.M.; Laboratory, Th., 7:30-9:30 P.M.; Z-115. An elementary course in descriptive astronomy. This course is self-contained; it is not required that it be followed by Astronomy 2. Lecture demonstration fee, \$3 per semester. (Uppgren.)

ASTR. 150. SPECIAL PROBLEMS IN ASTRONOMY.

June 21-Aug. 13. Arranged. Prerequisite, major in physics or astronomy and/or consent of advisor. Research or special study. Credit according to work accomplished. (Staff.)

PHYSICS AND ASTRONOMY

ASTR. 190. HONORS SEMINAR.

June 21-Aug. 13. Arranged. Enrollment is limited to students admitted to the Honors Programs in Astronomy. Credit according to work accomplished. (Staff.)

ASTR. 399. RESEARCH.

June 21-Aug. 13. Arranged. Laboratory fee, \$10 per credit hour. Prerequisite, an approved application for admission to candidacy or special permission of the Department of Physics and Astronomy. Credit according to work accomplished. (Staff.)

PHYS. 150. SPECIAL PROBLEMS IN PHYSICS. SECTION 1.

June 21-Aug. Arranged. Research or special study. Laboratory fee, \$10.00 per credit hour when appropriate. Prerequisite, major in physics and consent of Department Head. Credit according to work accomplished. (Staff.)

PHYS. 190. HONORS SEMINAR.

June 21-Aug. 13. Arranged. (Staff.)

PHYS. 222. BOUNDARY-VALUE PROBLEMS OF THEORETICAL PHYSICS. (2)

June 21-Aug. 13. Arranged. Prerequisite Physics 205. (Meckler.)

PHYS. 230. SEMINAR. (1)

June 21-Aug. 13. Arranged. One two-hour class per week. (Faculty.)

PHYS. 248. SPECIAL TOPICS IN MODERN PHYSICS. (2)

June 21-Aug. 13. Arranged. Two two-hour lectures per week. (Faculty.)

PHYS. 399. RESEARCH.

June 21-Aug. 13. Credit according to work accomplished. Laboratory fee, \$10.00 per credit hour. Prerequisite, approved application for admission to candidacy or special permission of the Department Chairman. Thesis research conducted under approved supervision. (Faculty.)

PSYCHOLOGY

PSYCH. 1. INTRODUCTION TO PSYCHOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. Section 1—8:00-9:20; G109B. Section 2—9:30-10:50; J14. A basic introductory course intended to bring the student into contact with the major problems confronting psychology and the more important attempts at their solution. (Turnage, Heermann.)

PSYCH. 5. PERSONALITY AND ADJUSTMENT. (3)

June 21-Aug. 13. M.T.Th.F. 8:00-9:20; A159. Prerequisite, Psych. 1. Introduction to the psychology of human personality and adjustment, with a view toward increasing self-understanding and developing an appreciation for the mental health movement and each individual's stake in it. (Johnson.)

PSYCH. 90. STATISTICAL METHODS IN PSYCHOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. 11:00-12:20; A52. Prerequisites, Psych. 1 and Math. 1, or 5 or 10 or equivalent. A basic introduction to quantitative methods used in psychological research. (Heermann.)

PSYCH. 110. EDUCATIONAL PSYCHOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. Two Sections: Section 1—8:00-9:20; M105. Section 2—11:00-12:20; G109B. Prerequisite, Psych. 1 or equivalent. Researches on fundamental psychological problems encountered in education. Measurement and significance of individual differences; learning, motivation, transfer of training, and the educational implications of theories of intelligence.

(Waldrop, Johnson.)

PSYCH. 131. ABNORMAL PSYCHOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. 9:30-10:50; A52. Prerequisite, two courses in Psychology. The nature, diagnosis, etiology, and treatment of mental disorders.

(Walder.)

PSYCH. 150. TESTS AND MEASUREMENTS. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; M105 with additional laboratory sessions T.Th. 1:30-3:30. Prerequisite, Psych. 90. Laboratory fee, \$4.00. Critical survey of measuring devices used in counseling, educational and industrial practice, with an emphasis on the theory, development and standardization. Laboratory work will incorporate training in methodology of test development together with appropriate practice in the use of selected tests.

(Waldrop.)

PSYCH. 194. INDEPENDENT STUDY IN PSYCHOLOGY. (1-3)

June 21-Aug. 13. Arranged. Prerequisite advanced standing and written consent of individual faculty supervisor. Integrated reading under direction leading to the preparation of an adequately documented report on a special topic.

(Staff.)

PSYCH. 195 MINOR PROBLEMS IN PSYCHOLOGY. (1-3)

June 21-Aug. 13. Arranged. Prerequisite, advanced standing and written consent of individual faculty supervisor. An individualized course designed to allow the student to pursue a specialized research project under supervision.

(Staff.)

PSYCH. 211. ADVANCED GENERAL PSYCHOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. 9:30-10:50; M304. Prerequisites, Psych. 145 or 146 and graduate standing. A systematic review of the more fundamental investigations upon which modern psychology is based.

(Turnage.)

PSYCH. 225. MEASUREMENT AND EVALUATION. (4)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; M105; with additional laboratory sessions T.Th. 1:30-3:30. Prerequisite, Psych. 150 and graduate standing. Laboratory fee, \$6.00. Theory and logic of the methodology of evaluation. Laboratory practice in methods of appraisal. Survey of available testing instruments and techniques.

(Walder.)

PSYCH. 269. PRACTICUM IN COMMUNITY MENTAL HEALTH CONSULTATION. (3)

June 21-Aug. 13. Arranged. Prerequisite, Psych. 264. Directly supervised field work in mental health consultation.

(Staff.)

PSYCH. 288. SPECIAL RESEARCH PROBLEMS. (1-4)

June 21-Aug. 13. Arranged. Requires graduate standing and consent of individual faculty supervisor. Supervised research on problems selected from

PSYCHOLOGY

the areas of experimental, industrial, social, quantitative, or mental health psychology. (Staff.)

PSYCH. 399. RESEARCH.

Arranged. Requires consent of individual faculty supervisor. (Staff.)

SOCIOLOGY

SOC. 1. INTRODUCTION TO SOCIOLOGY. (3)

June 21-Aug. 13. Introduction to the Study of Sociology. Sec. 1—M.T.Th.F. 8:9:30; A324; Sec. 2—M.T.Th.F. 12:30-1:50; A320. (Hirzel, Staff.)

SOC. 2. PRINCIPLES OF SOCIOLOGY. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; F-104. Prerequisite, Soc. 1. The basic forms of human association and interaction. (Jones.)

SOC. 5. ANTHROPOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. 9:30-10:50; A321. Introduction to anthropology; origins of man; development and transmission of culture; backgrounds of human institutions. (Anderson.)

SOC. 52. CRIMINOLOGY. (3)

June 21-Aug. 13. M.T.Th.F. 8:00-9:20; A320. Prerequisite, Soc. 1. Criminal behavior and the methods of its study. (Staff.)

SOC. 112. RURAL-URBAN RELATIONS. (3)

June 21-Aug. 13. M.T.Th.F. 8:00-9:20; A321. Prerequisite Soc. 1. The ecology of population and the forces making for change in rural and urban life; migration, decentralization and the regionalism as methods of studying individual and national issues. Applied field problems. (Jones.)

SOC. 121. POPULATION. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A258. Prerequisite, Soc. 1. Population distribution and growth in the United States and the world. (Hirzel.)

SOC. 125. CULTURAL HISTORY OF THE NEGRO. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A320. Cultures of Africa and cultural adjustments of the Negro in North and South America. (Anderson.)

SOC. 131. INTRODUCTION TO SOCIAL SERVICE. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A321. Prerequisite, Soc. 1. General survey of the field of social-welfare activities. (Di Bella.)

SOC. 153. JUVENILE DELINQUENCY. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; A324. Prerequisite, Soc. 1. Juvenile delinquency in relation to the general problem of crime. (Staff.)

SOC. 154. CRIME AND DELINQUENCY PREVENTION. (3)

M.T.Th.F., 11:00-12:20; A258. Prerequisite, Soc. 52 or Soc. 153 or consent of instructor. Methods and programs in prevention of crime and delinquency. (Lejins.)

SOC. 164. THE FAMILY AND SOCIETY. (3)

June 21-Aug. 13. M.T.Th.F., 12:30-1:50; A321. Prerequisite, Soc. 1. The family as a social institution. (Staff.)

SOC. 166. INTERVIEWING AND PROBLEM SOLVING IN SOCIAL WORK. (3)

June 21-Aug. 13. M.T.Th.F., 12:30-1:50; A258. Prerequisite, Soc. 1. Interviewing and other diagnostic techniques with particular reference to family and child behavior. (Di Bella.)

SOC. 186. SOCIOLOGICAL THEORY. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:30; A258. Prerequisite, Soc. 1. Development of the science of sociology. (Staff.)

SOC. 291. SPECIAL SOCIAL PROBLEMS.

June 21-Aug. 13. Arranged. Credit according to work accomplished. (Staff.)

SOC. 399. THESIS RESEARCH.

June 21-Aug. 13. Arranged. Credit according to work accomplished. (Staff.)

SPEECH

SPEECH 1. PUBLIC SPEAKING. (3)

Prerequisite for advanced speech courses. The preparation and delivery of short original speeches; outside readings; reports; etc. It is recommended that this course be taken during the freshman year. Laboratory fee \$1.00.

Section 1—June 21-August 13, M.T.Th.F., 8:00-9:20; NN-113. (Frank.)

Section 2—June 21-July 30, Daily, 9:30-10:50; NN-13. (Strausbaugh.)

Section 3—June 21-August 13, M.T.Th.F., 9:30-10:50, NN- (Wolfe.)

Section 4—June 21-July 30, Daily, 11:00-12:20, NN-9. (Batka.)

Section 5—June 21-July 30, Daily, 11:00-12:20, NN-22. (Linkow.)

SPEECH 3. FUNDAMENTALS OF GENERAL AMERICAN SPEECH. (3)

June 21-Aug. 13, M.T.Th.F., 8:00-9:20, NN-4. Training in auditory discrimination of speech sounds, rhythms and inflections of general American Speech. Analysis of the physiological bases of speech production and the phonetic elements of speech reception. This course is required of speech majors and recommended for foreign students and majors in nursery and elementary education. (Carter.)

SPEECH 16. INTRODUCTION TO THE THEATRE. (3)

June 21-July 30, Daily, 9:30-10:50, NN-22. A general survey of the fields of the theatre. (Pugliese.)

SPEECH 22. INTRODUCTION TO RADIO AND TELEVISION. (3)

June 21-July 30, Daily, 8:00-9:20, NN-22. Prerequisite for all courses in radio. The development, scope and influence of American broadcasting and telecasting, including visits to local radio and television stations, with guest lecturers from Radio Station WTOP and Television Station WTOP-TV.

(Batka.)

SPEECH 105. SPEECH HANDICAPPED SCHOOL CHILDREN. (3)

June 21-Aug. 13, M.T.Th.F., 9:30-10:50, NN-4. Prerequisite, Speech 3 for undergraduates. The occurrence, identification and treatment of speech handicaps in the classroom. An introduction to Speech Pathology. (Staff.)

SPEECH

SPEECH 106. CLINICAL PRACTICE. (1-3)

June 21-Aug. 13, T.F., 12:30-1:50 and arranged, NN-9. Prerequisite, Speech 105. A laboratory course dealing with the various methods of correction plus actual work in the clinic. Fee \$1.00 per semester hour. (Kanstoroom.)

SPEECH 111. SEMINAR. (3)

June 21-Aug. 13, Arranged. Prerequisites, senior standing and consent of instructor. Present day speech research. (Staff.)

SPEECH 120. SPEECH PATHOLOGY. (3)

June 21-Aug. 13, M.T.Th.F., 11:00-12:20, NN-4. Prerequisite, Speech 105. A continuation of Speech 105, with emphasis on the causes and treatment of organic speech disorders. Laboratory-fee \$3.00. (Staff.)

SPEECH 126. SEMANTIC ASPECTS OF SPEECH IN HUMAN RELATIONS. (3)

June 21-Aug. 13, M.T.Th.F., 9:30-10:50, NN-9. Prerequisite, one course in public speaking. An analysis of speech and language habits from the standpoint of general semantics. (Hendricks.)

SPEECH 127. CHILDREN'S DRAMATICS. (3)

June 21-Aug. 13, M.T.Th.F., 9:30-10:50, NN-55. Principles and methods necessary for staging children's productions on the elementary school level. Major emphasis on creative dramatics; the application of creative dramatics in the school room, and the values gained by the child in this activity. Students will conduct classes in formal and creative dramatics which will culminate in children's programs. (Meersman.)

SPEECH 201-C. SPECIAL PROBLEMS SEMINARS DELAYED SPEECH. (3)

June 21-Aug. 13, M.T.Th.F., 11:00-12:20, NN-13. Prerequisite, graduate standing in speech and hearing science. (Carter.)

SPEECH 201-I. SPECIAL PROBLEMS SEMINAR SPEECH INTELLIGIBILITY. (3)

June 21-July 30, Daily, 12:30-1:50, NN-4. Prerequisites, Speech 202 and Speech 203. (Baker.)

SPEECH 211. ADVANCED CLINICAL PRACTICE. (1-3)

June 21-Aug. 13, Room and Hours arranged. Prerequisites, 12 hours of speech pathology and audiology. Supervised training in the application of clinical methods in the diagnosis and treatment of speech and hearing disorders. Laboratory fee \$1.00 per semester hour. (Kanstroroom.)

SPEECH 214. CLINICAL AUDIOMETRY. (3)

June 21-Aug. 13, Room and Hours arranged. Prerequisites, 3 hours in audiology and consent of instructor. Testing of auditory acuity with pure tones and speech. Laboratory fee \$3.00. (Staff.)

SPEECH 262. SPECIAL PROBLEMS IN GENERAL SPEECH. (3)

June 21-Aug. 13, M.T.Th.F., 8:00-9:20, NN-102. (Weaver.)

SPEECH 272. SPECIAL PROBLEMS IN DRAMA. (3)

June 21-August 13, M.T.Th.F., 11:00-12:20, NN-55. The preparation of adaptations and other projects in dramaturgy. (Pugliese.)

SPEECH 290. INDEPENDENT STUDY. (1-3)

June 21-Aug. 13, Arranged. Prerequisite, consent of instructor. An individual course designed for intensive study or research of problems in any one of the three areas of: drama, general speech, or radio/TV. (Staff.)

SPEECH 399. RESEARCH.

June 21-Aug. 13, Arranged. Credit according to work accomplished. (Staff.)

ZOOLOGY

ZOOL. 1. GENERAL ZOOLOGY. (4)

June 21-Aug. 13. Four 80-minute lectures and two two-hour laboratories a week. Lectures M.T.Th.F. 8:00-9:20, F112; laboratory T.Th. 9:30, 10:30, R-203. Zool. 1 and 2 satisfy the freshman pre-medical requirement in general biology. An introduction to the modern concepts of biological principles and animal life. Emphasis will be placed upon the functional aspects of living systems with a survey of the physical and chemical bases of all life processes. Laboratory fee, \$8.00. (Staff.)

ZOOL. 55S. DEVELOPMENT OF THE HUMAN BODY. (2)

June 21-Aug. 13. Four one-hour lectures a week, M.T.Th.F. 11:00 A133. A study of the main factors affecting the growth and development of the child with special emphasis on normal development. (Staff.)

ZOOL. 118. INVERTEBRATE ZOOLOGY. (4)

June 21-Aug. 13. Four one-hour lectures and four three-hour laboratory periods a week. Lectures M.T.Th.F. 8:00 A52; laboratory M.T.Th.F. 9, 10, 11, R110. Prerequisite, one year of Zoology. An advanced course dealing with the taxonomy, morphology and embryology of the vertebrates, exclusive of insects. Laboratory fee, \$8.00. Open only to participants in the N.S.F. Institute. (Linder.)

ZOOL. 150. SPECIAL PROBLEMS IN ZOOLOGY. (1 OR 2)

Arranged. Prerequisite, major in zoology or biological sciences, a minimum of 3.0 cumulative average in the biological sciences, and consent of instructor. Research or integrated reading in zoology. A student may register several times and receive up to 8 semester hours of credit. Laboratory fee, \$8.00. (Staff.)

ZOOL. 152H. HONORS INDEPENDENT STUDY. (1-4)

Arranged. Prerequisites, participation in honors program. Study of classical material by way of guided independent study and laboratory experiments. Repeatable to a total of 12 hours credit. Laboratory fee, \$8.00. (Staff.)

ZOOL. 153H. HONORS RESEARCH. (1-2)

Arranged. Prerequisite, participation in honors program. A laboratory research problem; required each semester during honors participation and culminating in an honors thesis. Repeatable to a total of 8 hours credit. Laboratory fee, \$8.00. (Staff.)

ZOOL. 182. ETHOLOGY. (4)

June 21-Aug. 13. Four one-hour lectures and four three-hour laboratory periods a week. Lectures M.T.Th.F. 8:00, A161; laboratory M.T.Th.F. 9, 10, 11, R114.

BUSINESS ADMINISTRATION

Prerequisites, two years of Zoology including a course in comparative anatomy, or permission of instructor. The function, causation, and evolution of behavior. Laboratory analysis of the behavior of several species. Laboratory fee, \$8.00. (Ficken.)

ZOOL. 208. SPECIAL PROBLEMS IN ZOOLOGY.

Credit hours, and topics to be arranged. Laboratory fee, \$8.00. (Staff.)

ZOOL. 399. RESEARCH.

Research on thesis project only. Laboratory fee, \$8.00. Credit according to work accomplished. (Staff.)

BUSINESS AND PUBLIC ADMINISTRATION

BUSINESS ADMINISTRATION

B.A. 10. BUSINESS ENTERPRISE. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; Q-132. A survey course treating the internal and functional organization of business enterprise, its organization and control. (Staff.)

B.A. 20. PRINCIPLES OF ACCOUNTING. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-122. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorship, corporations and partnerships. (Sweeney.)

B.A. 21. PRINCIPLES OF ACCOUNTING. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-104. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorships, corporations and partnerships. (Sweeney.)

B.A. 110. INTERMEDIATE ACCOUNTING. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-110. Prerequisite, B.A. 21. A comprehensive study of the theory and problems of evaluation of assets, application of funds, corporation accounts and statements, and the interpretation of accounting statements. (Staff.)

B.A. 111. INTERMEDIATE ACCOUNTING. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-122. Prerequisite, B.A. 21. A comprehensive study of the theory and problems of valuation of assets, application of funds, corporation accounts and statements, and the interpretation of accounting statements. (Edelson.)

B.A. 120. ACCOUNTING SYSTEMS. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-123. How to make a survey of the business, select the methods to be used, design the system or procedure, and prepare the systems report or manual. (Himes.)

B.A. 124. ADVANCED ACCOUNTING. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; Q-122. Prerequisite, B.A. 111 or consent of instructor. Advanced accounting theory applied to specialized

problems in partnerships, ventures, consignments, installment sales, insurance, statement of affairs, receiver's accounts, realization and liquidation reports, governmental accounting, and applications of mathematics to accounting problems. (Hermanson.)

B.A. 125. C.P.A. PROBLEMS. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-132. Prerequisite, B.A. 111, or consent of instructor. A study of the nature, form and content of C.P.A. examinations by means of the preparation of solutions to, and an analysis of, a large sample of C.P.A. problems covering the various accounting fields. (Edelson.)

B.A. 130. BUSINESS STATISTICS I. (3)

June 21-Aug. 13. M.T.Th.F. Prerequisite, junior standing. Laboratory fee, \$10.00.

An introductory course. Topics covered include statistical observation, frequency distribution, averages, measures of variability, elementary probability, sampling, distribution, problems of estimation, simple tests of hypotheses, index numbers, time series, graphical and tabular presentation.

Section I—8:00-9:20, Q-103.

(Nelson.)

Section II—9:30-10:50, Q-103.

(Calhoun.)

Section III—11:00-12:20, Q-103.

(Anderson.)

Section IV—12:30-1:50, Q-103.

(Calhoun.)

B.A. 140. BUSINESS FINANCE. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-111. Deals with principles and practices involved in the organization, financing, and reconstruction of corporations; the various types of securities, and their use in raising funds, apportioning income; risk and control; intercorporate relations; and new developments. (Olson.)

B.A. 149. MARKETING PRINCIPLES AND ORGANIZATION. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-123. An introductory course to give a general understanding and appreciation of the forces operating, institutions employed, and methods followed in marketing agricultural products, natural products, services, and manufactured goods. (Ashman.)

B.A. 151. ADVERTISING. (3)

June 21-Aug. 13. M.T.Th.F., 12:30-1:50; Q-133. Prerequisite, B.A. 149 or consent of instructor. A study of the role of advertising in the American economy; the impact of advertising on our economic and social life, the methods and techniques currently applied by advertising practitioners and modern research methods to improve the effectiveness of advertising, and the organization of the advertising business. (Ryans.)

B.A. 160. PERSONNEL MANAGEMENT I. (3)

June 21-Aug. 13. M.T.Th.F., 12:30-1:50; Q-104. Deals with functional and administrative relationships between management and the labor force. It comprises a survey of the scientific selection of employees, "in-service" training, job analysis, classification and rating, motivation of employees, employee adjustment, wage incentives, employee discipline and techniques of supervision, and elimination of employment hazards. (Staff.)

BUSINESS ADMINISTRATION

B.A. 163. LABOR RELATIONS. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-111. A study of the development and methods of organized groups in industry with reference to the settlement of labor disputes. An economic and legal analysis of labor union and employer association activities, arbitration, mediation and conciliation; collective bargaining, trade agreements, strikes, boycotts, lockouts, company unions, employee representation and injunctions. (Carroll.)

B.A. 168. MANAGEMENT AND ORGANIZATION THEORY. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; Q-111. The development of management and organization theory, nature of the management process and function and its future development. The role of the manager as an organizer and director, the communication process, goals and responsibilities. (Tosi.)

B.A. 171. TRAFFIC AND PHYSICAL DISTRIBUTION MANAGEMENT. (3)

June 21-Aug. 13. M.T.Th.F. 8:00-9:20, Q-133. Prerequisite, junior standing. Examines the management aspects of the business firm in moving their raw materials and finished goods, through traffic, warehousing, industrial packaging, material handling, and inventory. A systematic examination of the trade-off possibilities and management alternatives to minimize cost of product flow and maximizing customer service is provided. (Staff.)

B.A. 180. BUSINESS LAW. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-28. Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property and sales. (Dawson.)

B.A. 182. ADVANCED BUSINESS LAW. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-133. Designed primarily for CPA candidates. Legal aspects of wills, insurance, torts and bankruptcy. (Dawson.)

B.A. 189. BUSINESS AND GOVERNMENT. (3)

June 21-Aug. 13. M.T.Th.F., 11-12:20; Q-104. A study of the role of government in modern economic life. Social control of business as a remedy for the abuses of business enterprise arising from the decline of competition. Criteria of limitations on government regulation of private enterprise. (Staff.)

B.A. 199. BUSINESS POLICIES. (3)

June 21-Aug. 13. M.T.Th.F. 9:30-10:50; Q-130. Prerequisite, senior standing. A case study course in which the aim is to have the student apply both what he has learned of general management principles and their specialized functional applications of the overall management function in the enterprise. (Daiker.)

B.A. 280. SEMINAR IN BUSINESS AND GOVERNMENT. (3)

June 21-Aug. 13. Evening meeting hours arranged. Lab fee, \$10.00. Open only to graduate students. Application of management principles to the solution of complex business problems. Game Theory and computer application where feasible are applied. (Barlett.)

B.A. 283. MANAGEMENT POLICY FORMULATION. (3)

June 21-Aug. 13. Evening meeting hours arranged. Open only to graduate

students. Examines the executive's social and ethical responsibilities to his employees, customers, and to the general public. The trends in public policy and their future effect upon management are examined. (Raia.)

B.A. 399. THESIS. (1-6)

Arranged. Credit according to work accomplished.

ECONOMICS

ECON. 4. ECONOMIC DEVELOPMENTS. (3)

June 21-Aug. 13. 11:00-12:20; M.T.Th.F.; Q-28; no prerequisite. Introduction to modern economic institutions with emphasis on development in England, Western Europe and the United States. (Staff.)

ECON. 31. PRINCIPLES OF ECONOMICS. (3)

June 21-Aug. 13. Sec. 1 M.T.Th.F., 8:00-9:20; Q-107. Sec. 2, M.T.Th.F., 9:30; Q-28. Prerequisite, sophomore standing. A general analysis of the functioning of the economic system, with special emphasis on national income analysis. A considerable portion of the course is devoted to a study of basic concepts and explanatory principles. The remainder deals with the major problems of the economic system. (Staff.)

ECON. 32. PRINCIPLES OF ECONOMICS. (3)

June 21-Aug. 13. Sec. 1, M.T.Th.F., 8:00; Q-129. Sec. 2, M.T.Th.F., 9:30-10:50; Q-107. Prerequisite, Econ. 31. A general analysis of the functioning of the economic system, with special emphasis on resource allocation. A considerable portion of the course is devoted to a study of basic concepts and explanatory principles. The remainder deals with the major problems of the economic system. (Staff.)

ECON. 37. FUNDAMENTALS OF ECONOMICS. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-130. Prerequisite, sophomore standing. Not open to students who have credit in Econ. 31 and 32. Not open to B.P.A. students. A survey of the general principles underlying economic activity. This is the basic course in economics for the American Civilization Program for students who are unable to take the more complete course provided in Econ. 31 and 32. (Staff.)

ECON. 102. NATIONAL INCOME ANALYSIS. (3)

June 21-Aug. 13. 11:00-12:20; M.T.Th.F.; Q-123. Prerequisite, Econ. 32. Required for Econ. majors. An analysis of national income accounts and the level of national income and employment. (Staff.)

ECON. 131. COMPARATIVE ECONOMIC SYSTEMS. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-110. Prerequisite, Econ. 32 or 37. An investigation of the theory and practice of various types of economic systems. The course begins with an examination and evaluation of the capitalistic system and is followed by an analysis of alternative types of economic systems such as fascism, socialism, and communism. (Staff.)

GEOGRAPHY

ECON. 132. ADVANCED ECONOMIC PRINCIPLES. (3)

June 21-Aug. 13. M.T.Th.F., 9:30-10:50; Q-104. Prerequisite, Econ. 32. Required for economics majors. This course is an analysis of price and distribution theory with special attention to recent developments in the theory of imperfect competition. (Staff.)

ECON. 140. MONEY AND BANKING. (3)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; Q-108. Prerequisite, Econ. 32 or 37. A study of the organization, functions, and operation of our monetary, credit, and banking system; the relation of commercial banking to the Federal Reserve System; the relation of money and credit to prices; domestic and foreign exchange and the impact of public policy upon banking and credit. (Staff.)

ECON. 160. LABOR ECONOMICS. (3)

June 21-Aug. 13. M.T.Th.F., 11:00-12:20; Q-107. Prerequisite, Econ. 32 or 37. The historical development and chief characteristics of the American labor movement are first surveyed. Present day problems are then examined in detail; wage theories, unemployment, social security, labor organization, collective bargaining. (Staff.)

ECON. 237. SELECTED TOPICS IN ECONOMICS. (3)

Arranged.

ECON. 399. THESIS. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

GEOGRAPHY

GEOG. 10. GENERAL GEOGRAPHY. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; Q-228. Introduction to geography as a field of study. A survey of the content, philosophy, techniques, and application of geography and its significance for the understanding of world problems. (Mika.)

GEOG. 40. PRINCIPLES OF METEOROLOGY. (3)

June 21-Aug. 13. M.T.Th.F., 9:30; Q-210. Properties and conditions of the atmosphere. The atmospheric circulation and conditions responsible for various types of weather and their geographic distribution patterns. (Chaves.)

GEOG. 103S. GEOGRAPHIC CONCEPTS AND SOURCE MATERIALS. (3)

June 21-Aug. 13. M.T.Th.F. 11:00; Q-210. A comprehensive and systematic survey of geographic concepts designed exclusively for teachers. Stress will be placed upon the philosophy of geography in relation to the social and physical sciences, the use of primary tools of geography, source materials, and the problems of presenting geographic principles. (Schmieder.)

GEOG. 105. GEOGRAPHY OF MARYLAND AND ADJACENT AREAS. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; Q-210. An analysis of the physical environment, natural resources, and population in relation to agriculture, industry, transport and trade in the state of Maryland and adjacent areas. (Schmieder.)

GEOG. 120. GEOGRAPHY OF EUROPE. (3)

June 21-Aug. 13. M.T.Th.F., 11:00; Q-228. Agricultural and industrial devel-

GOVERNMENT AND POLITICS

opment of Europe and present-day problems in relation to the physical and cultural setting of the continent and its natural resources. (Van Royen.)

GEOG. 161. ADVANCED ECONOMIC GEOGRAPHY II—MINERAL RESOURCES. (3)

June 21-Aug. 13. M.T.Th.F., 9:30; Q-228. Prerequisite, Geog. 10 or Geog. 15. The nature and geographic distribution of the principal power, metallic and other minerals. Economic Geographic aspects of modes of exploitation. Consequences of geographic distribution and problems of conservation. (Van Royen.)

GOVERNMENT AND POLITICS

G. & P. 1. AMERICAN GOVERNMENT. (3)

June 21-Aug. 13. This course is designed as the basic course in government, and it or its equivalent is a prerequisite to all other courses in the Department. It is a comprehensive study of governments in the United States—national, state, and local.

Section 1—M.T.Th.F. 8:00; Q-213.

(Conway.)

Section 2—M.T.Th.F. 9:30; Q-213.

(Dillon.)

Section 3—M.T.Th.F. 11:00; Q-213.

(Byrd.)

G. & P. 40. POLITICAL IDEOLOGIES. (3)

June 21-Aug. 13. M.T.Th.F., 9:30; Q-211. Prerequisite, G. & P. 1. A survey and analysis of the leading ideologies of the modern world, including anarchism, communism, socialism, fascism, nationalism, and democracy. (Terchek.)

G. & P. 97. GOVERNMENTS AND POLITICS OF EUROPE. (3)

June 21-Aug. 13. M.T.Th.F., 11:00; Q-108. Prerequisite, G & P 1. A comparative study of the political systems of the United Kingdom, France, Germany, Italy, and other selected European countries. (Jacobsohn.)

G. & P. 101. INTERNATIONAL POLITICAL RELATIONS. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; Q-131. Prerequisite, G. & P. 1. A study of the major factors underlying international relations, the methods of conducting foreign relations, the foreign policies of the major powers, and the means of avoiding or alleviating international conflicts. (Kim.)

G. & P. 106. AMERICAN FOREIGN RELATIONS. (3)

June 21-Aug. 13. M.T.Th.F., 11:00; Q-211. Prerequisite, G. and P. 1. The principles and machinery of the conduct of American foreign relations, with emphasis on the Department of State and the Foreign Service, and an analysis of the major foreign policies of the United States. (Hanus.)

G. & P. 110. PRINCIPLES OF PUBLIC ADMINISTRATION. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; Q-132. Prerequisite, G. & P. 1. A survey of public administration in the United States, giving special attention to the principles or organization and management and to fiscal, personnel, planning, and public relations practices. (Frederickson.)

G. & P. 142. RECENT POLITICAL THEORY. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; Q-211. Prerequisite, G. & P. 1. A study of 19th and 20th century political thought, with special emphasis on recent theories of socialism, communism, and fascism. (Byrd.)

GOVERNMENT AND POLITICS

G. & P. 154. PROBLEMS OF WORLD POLITICS. (3)

June 21-Aug. 13. M.T.Th.F., 9:30; Q-108. Prerequisite, G & P 1. A study of governmental problems of international scope, such as causes of war, problems of neutrality, and propaganda. Students are required to report on readings from current literature. (Steinmeyer.)

G. & P. 174. POLITICAL PARTIES. (3)

June 21-Aug. 13. M.T.Th.F., 9:30; Q-131. Prerequisite, G & P 1. A descriptive and analytical examination of American political parties, nominations, elections, and political leadership. (Hathorn.)

G. & P. 178. PUBLIC OPINION. (3)

June 21-Aug. 13. M.T.Th.F., 11:00; Q-110. Prerequisite, G & P 1. An examination of public opinion and its effect on political action, with emphasis on opinion formation and measurement, propaganda, and pressure groups. (Conway.)

G. & P. 203. FUNCTIONAL PROBLEMS IN INTERNATIONAL RELATIONS. (3)

To be arranged; Q-369. An examination of the major substantive issues in contemporary international relations, involving reports on selected topics based on individual research. (McNelly.)

G. & P. 207. SEMINAR IN COMPARATIVE GOVERNMENTAL INSTITUTIONS. (3)

To be arranged; Q-369. Reports on selected topics for individual study and reading in governmental and political institutions in governments throughout the world. (Steinmeyer.)

G. & P. 213. PROBLEMS OF PUBLIC ADMINISTRATION. (3)

June 21-Aug. 13. To be arranged; Q-369. Reports on topics assigned for individual study and reading in the field of public administration. (Dillon.)

G. & P. 261. PROBLEMS IN AMERICAN GOVERNMENT AND POLITICS. (3)

To be arranged; Q-369. An examination of contemporary problems in various fields of government and politics in the United States, with reports on topics assigned for individual study. (Hathorn.)

G. & P. 399. THESIS RESEARCH. (1-6)

To be arranged. (Staff.)

JOURNALISM AND PUBLIC RELATIONS

JOURN. 10. INTRODUCTION TO JOURNALISM. (3)

June 21-July 30. Daily, 9:00; G-304. Survey of journalism, professional careers in writing and communications, news writing in laboratory. Prerequisites: At least average grade of C in Eng. 1 and 2 or 21; ability to type at least 30 words a minute. Laboratory fee, \$3.00. (Newsom.)

JOURN. 11. NEWS REPORTING. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; G-304. News writing and reporting, campus news beat in producing supervised weekly school newspaper in laboratory. Prerequisite: Type 30 words per minute. Laboratory fee, \$3.00. (Noall.)

JOURN. 152. ADVERTISING COPY AND LAYOUT. (3)

June 21-July 30. Daily, 11:00; G-307. Theory and practice in advertising copy and layout, with emphasis on newspaper advertising, for letterpress and photo-offset printing. Use of illustrations, type selection, copy-fitting, media selection. (Newsom.)

JOURN. 160. NEWS EDITING. (3)

June 21-Aug. 13. M.T.Th.F., 8:00; G-305. News editing, head writing, newspaper layout, on supervised weekly school newspaper in laboratory. Laboratory fee, \$3.00. (Crowell.)

JOURN. 165. FEATURE WRITING. (3)

June 21-July 30. Daily, 9:00; G-309. Writing and selling of newspaper and magazine articles. Production of features for supervised weekly school newspaper. (Geraci.)

JOURN. 173-S. SCHOLASTIC JOURNALISM. (3)

June 21-July 9. Daily, 10:00-3:30; G-304, G-305, G-309. Introduction to theory and practice in production of high school publications, for scholastic publications advisers. (See page 21.) (Noall, Crowell.)

JOURN. 181. PRESS PHOTOGRAPHY. (3)

June 21-July 30. Daily, 10:00-12:00; G-208. Introduction to fundamentals of shooting, developing, printing of news and feature pictures. Production of pictures for supervised weekly school newspaper. Equipment furnished by the department, supplies by the student. Laboratory fee, \$6.00. (Geraci.)

JOURN. 192. HISTORY OF AMERICAN JOURNALISM. (3)

June 21-July 30. Daily, 10:00; G-109B. Influences on political, social and cultural institutions. (Kobre.)

P. R. 166. PUBLIC RELATIONS. (3)

June 21-July 30. Daily, 1:00; G-109B. Survey of principles, general orientation. (Kobre.)

EDUCATION

*EARLY CHILDHOOD—ELEMENTARY EDUCATION **

ECEED 52. INTRODUCTION TO CHILDREN'S LITERATURE. B. (2)

June 21-July 30. M.T.Th.F., 9:30; L-452M. Prerequisite: English 1 and 2 (Jimenez-Hernandez.)

ECEED 105-A. SCIENCE IN THE ELEMENTARY SCHOOL. A, B. (2-3)

Section 1-A. (3) June 21-July 30. Daily, 9:30; AA-8. (Stant.)
 Section 2-B. (3) June 21-July 30. Daily, 8:00; T-119. (Blough.)
 Section 3-B. (3) June 21-Aug. 13. M.T.Th.F., 9:30; F-103. (Williams.)
 Section 4-B. (2) June 21-Aug. 13. M.W.F., 8:00; F-103. Open only to pre-service undergraduate students. Laboratory fee, \$2.00. (Williams.)

*Throughout this section, A refers to Early Childhood level, B refers to Elementary level, C refers to Secondary level.

EDUCATION

ECEED 115. ACTIVITIES AND MATERIALS IN EARLY CHILDHOOD EDUCATION. (3)

June 21-July 30. Daily, 8:00; AA-9. Prerequisite: ECEED 50, 51, or 110.
Laboratory fee, \$5.00. (Stant.)

ECEED 116. MUSIC IN EARLY CHILDHOOD EDUCATION. (3)

June 21-July 30. Daily, 9:30; AA-9. Prerequisite: Music 16 or equivalent.
(L. Brown.)

ECEED 121. LANGUAGE ARTS IN THE ELEMENTARY SCHOOL. B. (2-3)

Section 1 (3) June 21-July 30. Daily, 9:30; A-320. (Seidman.)
Section 2 (2) June 21-Aug. 13. M.W.F., 8:00; A-8. Open only to pre-service
undergraduate students. (Staff.)

ECEED 122. SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. B. (2-3)

Section 1 (3) June 21-Aug. 13. M.T.Th.F., 11:00; A-174. (Weaver.)
Section 2 (2) June 21-Aug. 13. M.W.F., 9:30; A-174. Open only to pre-
service undergraduate students. (Weaver.)

ECEED 124. MATHEMATICS IN THE ELEMENTARY SCHOOL. B. (3)

Section 1 June 21-Aug. 13. M.T.Th.F., 8:00; A-48. (Schindler.)
Section 2 June 21-Aug. 13. M.T.Th.F., 9:30; A-48. (Schindler.)

ECEED 125. ART IN THE ELEMENTARY SCHOOL. (3)

June 21-July 30. Daily, 11:00; A-8. (Longley.)
Enrollment limited to 25 students.

ECEED 153. THE TEACHING OF READING. B. (2-3)

Section 1 (3) June 21-July 30. Daily, 11:00; A-14. (Hall.)
Section 2 (3) June 21-July 30. Daily, 8:00; A-174 (Jimenez-Hernandez.)
Section 3 (2) June 21-Aug. 13. M.W.F., 9:30; F 101. Open only to pre-service
undergraduate students. (Staff.)

ECEED 200. SEMINAR IN ELEMENTARY EDUCATION. (2)

June 21-July 30. M.T.Th.F., 8:00; A-163. (Duffey.)

ECEED 205. PROBLEMS OF TEACHING SCIENCE IN ELEMENTARY SCHOOLS. (2)

June 21-July 30. M.T.Th.F., 9:30; T-119. (Blough.)

ECEED 221. PROBLEMS OF TEACHING LANGUAGE ARTS IN ELEMENTARY SCHOOLS. (2)

June 21-July 30. M.T.Th.F., 11:00; F-104. (Seidman.)

GENERAL EDUCATION

ED. 102. HISTORY OF EDUCATION IN THE UNITED STATES. (3)

Section 1—June 21-July 30. Daily, 11:00; F-112. (deBeruff.)
Section 2—June 21-Aug. 13. M.T.Th.F., 9:30; F-112. (Agre.)

ED. 107. PHILOSOPHY OF EDUCATION. (3)

June 21-Aug. 13. M.T.Th.F., 11:00; F-101. (Agre.)

- ED. 110. HUMAN DEVELOPMENT AND LEARNING. (6)**
 Students in Ed. 110 must reserve Wednesday mornings for observation-participation in a public school off-campus.
 Open only to students who are in degree teacher education curricula and who have achieved junior standing.
 Section 1—June 21-Aug. 13. 8:00-10:50, M.T.Th.F.; J-149. (Hatfield.)
 Section 2—June 21-Aug. 13. 9:30-12:20, M.T.Th.F.; J-150. (Lawson.)
- ED. 111. FOUNDATIONS OF EDUCATION. (3)**
 Open only to students who are in degree teacher education curricula and who have achieved junior standing.
 June 21-July 30. Daily, 11:00; A-48. (Noll.)
 (Limited to regular undergraduate students in Education)
- ED. 147. AUDIO-VISUAL EDUCATION. (3)**
 Section 1—June 21-July 30. Daily, 8:00; P-300. (Maley.)
 Section 2—June 21-July 30. Daily, 9:30; P-300. (Schramm.)
 Section 3—June 21-Aug. 13. 11:00, M.T.Th.F.; P-300. (Schramm.)
 Laboratory fee, \$1.00.
- ED. 150. EDUCATIONAL MEASUREMENT. (3)**
 Section 1—June 21-Aug. 13. 9:30, M.T.Th.F.; G-205. Limited to 35 (Klevan.)
 Section 2—June 21-Aug. 13. 11:00, M.T.Th.F.; G-205. Limited to 35 (Klevan.)
- ED. 151. STATISTICAL METHODS IN EDUCATION. (3)**
 Section 1—June 21-Aug. 13. 8:00, M.T.Th.F.; O-236. Limited to 40 (Gettle.)
 Section 2—June 21-Aug. 13. 9:30, M.T.Th.F.; O-236. Limited to 40 (Dayton.)
- ED. 157. CORRECTIVE-REMEDIAL READING INSTRUCTION. (3)**
 June 21-July 30. Daily, 8:00; O-240. (Sullivan.)
- ED. 161. INTRODUCTION TO COUNSELING AND PUPIL SERVICES. (3)**
 June 21-July 30. Daily, 11:00; O-236. (Staff.)
- ED. 162. MENTAL HYGIENE IN THE CLASSROOM. (3)**
 June 21-July 30. Daily, 9:30; O-240. (Staff.)
- ED. 188. SPECIAL PROBLEMS IN EDUCATION. (1-3)**
 Prerequisite, consent of instructor. Available only to mature students who have definite plans for individual study of approved problems. Course cards must have the title of the problem and the name of the faculty member who has approved it. Arranged. Credit according to work accomplished. (Staff.)
- ED. 189. WORKSHOPS, CLINICS, AND INSTITUTES.**
- ED. 189-1. EDUCATION IN FAMILY FINANCE. (4)**
 June 21-July 16. 8:30-3:30; Q-27. (C. Anderson.)
 See page 16
- ED. 189-7. WORKSHOP IN SUPERVISION OF STUDENT TEACHERS. (3)**
 June 21-July 9. Daily, 9:30-3:30; LL-202. (Collins.)
 See page 23

EDUCATION

- ED. 189-8. WORKSHOP IN INSTRUCTIONAL MATERIALS. (3)
June 21-July 9. 11:00-12:20 and 1:30-2:50; L-100. (Staff.)
See page 20
- ED. 189-26. HUMAN RELATIONS IN EDUCATIONAL ADMINISTRATION (6)
June 21-July 30. Daily, 9:00-3:00.
Prerequisite, a master's degree. Enrollment limited. Preference in enrollment will be given to teams designated by Maryland school systems. (Newell.)
See page 20
- ED. 189-29. WORKSHOP IN THE EDUCATION OF CHILDREN WITH LEARNING DISABILITIES. (4)
June 21-July 30. Daily 9:00-12:30. To be held off-campus. (Fouracre, Mills.)
See page 15
- ED. 189-33. CHILD STUDY LEADERS. (2)
June 21-July 2. Daily, 8:00-3:00; J-36. (Goering, Prescott.)
See page 18
- ED. 189-35. APPLICATION OF HUMAN DEVELOPMENT PRINCIPLES IN CLASSROOMS. (2)
July 5-July 16. Daily, 8:00-3:00; J-36. (Prescott.)
See page 19
- ED. 189-36. HUMAN DEVELOPMENT AND RELIGIOUS EDUCATION. (2)
July 19-July 30. Daily, 8:00-3:00; J-131. (Goering, Prescott.)
See page 19
- ED. 189-37. ACTION RESEARCH IN HUMAN DEVELOPMENT EDUCATION. (2)
Aug. 2-Aug. 13. Daily, 8:00-3:00; J-131. (Goering.)
See page 19
- ED. 189-41. N.D.E.A. COUNSELING AND GUIDANCE TRAINING INSTITUTE. (7)
June 21-Aug. 6. Daily, 8:00-5:00; J-154. (Ray.)
See page 13
- ED. 189-47. WORKSHOP FOR TEACHERS OF SECONDARY SCHOOL ENGLISH. (3)
June 21-July 9. Daily, 9:30-3:30; G-109A. (Bryan.)
See page 17
- ED. 189-53. EDUCATOR'S WORKSHOP ON AUTOMATIC DATA PROCESSING. (6)
June 21-July 30. Daily, 9:00-12:00. Daily, Labs. and conferences, p.m.; Q-19.
A prerequisite of mathematics is not required. (See page 16) (Patrick.)
- ED. 189-57. WORKSHOP IN TEAM TEACHING. (3)
June 21-July 9. Daily, 9:30-3:30; J-6. (Staff.)
See page 23

- TYPEWRITING DEMONSTRATION LABORATORY. (0)**
 June 21-July 30. 8:30-10:15. (O'Neill.)
- ED. 202. JUNIOR COLLEGE. (3)**
 June 21-July 30. Daily, 9:30; A-10. (Kelsey.)
- ED. 203. PROBLEMS IN HIGHER EDUCATION. (3)**
 June 21-July 30. Daily, 8:00; A-10. (Kelsey.)
- ED. 205. COMPARATIVE EDUCATION. (3)**
 June 21-July 30. Daily, 9:30; AR-20. (Lindsay.)
- ED. 207. SEMINAR IN HISTORY AND PHILOSOPHY OF EDUCATION. (2)**
 June 21-July 30. 8:00, M.T.Th.F.; A-101. (Noll.)
- ED. 210. THE ORGANIZATION AND ADMINISTRATION OF PUBLIC EDUCATION. (3)**
 June 21-July 30. Daily, 8:00; A-164. (Staff.)
- ED. 211. THE ORGANIZATION AND ADMINISTRATION OF SECONDARY SCHOOLS. (3)**
 June 21-July 30. Daily, 8:00; A-166. (J. P. Anderson.)
- ED. 212. SCHOOL FINANCE AND BUSINESS ADMINISTRATION. (3)**
 June 21-July 30. Daily, 9:30; T-10. (van Zwoll.)
- ED. 216. PUBLIC SCHOOL SUPERVISION. (3)**
 June 21-July 30. Daily, 11:00; A-163. (J. P. Anderson.)
- ED. 217. ADMINISTRATION AND SUPERVISION IN ELEMENTARY SCHOOLS. (3)**
 June 21-July 30. Daily, 9:30; T-5. (Dudley.)
- ED. 219. SEMINAR IN EDUCATIONAL ADMINISTRATION AND SUPERVISION. (2)**
 June 21-July 30. M.T.Th.F., 11:00; A-166. Prerequisite, at least four hours in educational administration and supervision or consent of instructor. A student may register for two hours and take the seminar a second time for an additional two hours. (Dudley.)
- ED. 225. SCHOOL PUBLIC RELATIONS. (3)**
 June 21-July 30. Daily, 8:00; A-167. (van Zwoll.)
- ED. 234. THE SCHOOL CURRICULUM. (2)**
 June 21-July 30. M.T.Th.F., 9:30; O-101. (Neville.)
- ED. 235. PRINCIPLES OF CURRICULUM DEVELOPMENT. (3)**
 June 21-July 30. Daily, 8:00; T-10. (Staff.)
- ED. 245. INTRODUCTION TO RESEARCH. (2)**
 Section 1—June 21-July 30. M.T.Th.F., 8:00; A-165. Limited to 20 (Clark.)
 Section 2—June 21-July 30. M.T.Th.F., 9:30; A-165. Limited to 20 (Raths.)
 Section 3—June 21-Aug. 13. M.W.F., 9:30; J-143. Limited to 20 (Stunkard.)
 Section 4—June 21-Aug. 13. M.W.F., 11:00; J-143. Limited to 20 (Adkins.)

EDUCATION

- ED. 249. PERSONALITY THEORIES IN EDUCATION. (3)
June 21-July 30. Daily, 8:00; G-109A. Prerequisite, consent of instructor.
(Staff.)
- ED. 251. INTERMEDIATE STATISTICS IN EDUCATION. (3)
June 21-Aug. 13. M.T.Th.F., 8:00; T-5. Limited to 35 (Dayton.)
- ED. 253. OCCUPATIONAL CHOICE THEORY AND INFORMATION. (3)
June 21-Aug. 13. M.T.Th.F., 8:00; LL-104. (Staff.)
- ED. 255. ADVANCED LABORATORY EXPERIENCES IN READING INSTRUCTION. (3)
June 21-July 30. Daily, Arranged. Ed. Annex.
Prerequisites, 21 credits applicable to master's program in Corrective-Remedial Reading, including Ed. 154, Ed. 150, and Ed. 141 or ECEE 221; and a written application before June 1. (Sullivan.)
- ED. 256. ADVANCED LABORATORY EXPERIENCES IN READING INSTRUCTION. (3)
June 21-July 30. Daily, Arranged. Prerequisite, same as those for Ed. 255.
(Sullivan.)
- ED. 260. SCHOOL COUNSELING: THEORETICAL FOUNDATIONS AND PRACTICE. (3)
June 21-July 30. Daily, 11:00; A-167. Prerequisites, Ed. 161, Ed. 250, and Ed. 253. (Ehrle.)
- ED. 261. PRACTICUM IN COUNSELING. (2)
June 21-July 30. Daily, 9:30; LL-201.
Prerequisites, Ed. 260.
Enrollment limited; apply to Dr. Kenneth R. Greenberg, College of Education. (Staff.)
- ED. 262. MEASUREMENT IN PUPIL APPRAISAL. (3)
June 21-Aug. 13. M.T.Th.F., 8:00; LL-201.
Limited to 35. Prerequisite, Ed. 150 or equivalent. (Gerberich.)
- ED. 269. COUNSELING AND PUPIL SERVICES SEMINAR. (2)
June 21-July 30. M.T.Th.F., 11:00; A-259. (Staff.)
- ED. 280. RESEARCH METHODS AND MATERIALS. (2)
June 21-Aug. 13. Arranged.
Primarily for advanced students and doctoral candidates. Limited to 15. (Stunkard.)
- ED. 281. SOURCE MATERIALS IN EDUCATION. (2)
June 21-July 30. M.T.Th.F., 8:00; AR-20. (Lindsay.)
- ED. 288. SPECIAL PROBLEMS IN EDUCATION. (1-6)
Arranged. Master of Education or doctoral candidates who desire to pursue special research problems under the direction of their advisers may register for credit under this number. Course cards must have the title of the problem and the name of the faculty member under whom the work will be done. Credit according to work accomplished. (Staff.)

EDUCATION

- ED. 290. DOCTORAL SEMINAR. (1)
 June 21-Aug. 13. Arranged. Prerequisite, consent of instructor. (Stunkard.)
- ED. 399. RESEARCH-THESIS. (1-6)
 Arranged. Credit according to work accomplished. (Staff.)

SECONDARY EDUCATION

General and Academic Education

- SEC. ED. 133. METHODS OF TEACHING SOCIAL STUDIES IN SECONDARY SCHOOLS. (3)
 June 21-July 30. Daily, 9:30; AR-21. (Van Ness.)
- SEC. ED. 138. METHODS OF TEACHING SCIENCE IN SECONDARY SCHOOLS. (3)
 June 21-July 30. Daily, 9:30; T-10. Lab fee, \$2.00. (DiLamore.)
- SEC. ED. 142. TEACHING THE AUDIO-LINGUAL SKILLS IN FOREIGN LANGUAGES. (3)
 June 21-July 30. Daily, 9:30; AR-40. (Kelly.)
- SEC. ED. 145. PRINCIPLES AND METHODS OF SECONDARY EDUCATION. (3)
 June 21-July 30. Daily, 8:00; AR-21. (Adkins.)
- SEC. ED. 239. SEMINAR IN SECONDARY EDUCATION. (2)
 June 21-July 30. M.T.Th.F., 8:00; AR-40. (Ulry.)

Business Education

- BUS. ED. 101. PROBLEMS IN TEACHING OFFICE SKILLS. (2)
 June 21-July 30. M.T.Th.F., 11:00; Q-6. (O'Neill.)
- BUS. ED. 200. ADMINISTRATION AND SUPERVISION OF BUSINESS EDUCATION. (3)
 June 21-July 30. Daily, 12:30; Q-6. (Dame.)
- BUS. ED. 255. PRINCIPLES AND PROBLEMS OF BUSINESS EDUCATION. (3)
 June 21-July 30. Daily, 9:30; Q-6. (Dame.)

Home Economics Education

- H.E. ED. 102. PROBLEMS IN TEACHING HOME ECONOMICS. (3)
 June 21-July 16. M.T.Th.F., 8:00-10:30; A-50. (Spencer.)
- H.E. ED. 200. SEMINAR IN HOME ECONOMICS EDUCATION. (2)
 July 19-Aug. 13. M.T.Th.F., 8:00-9:50; A-50. (Spencer.)

EDUCATION

MUSIC EDUCATION

(for Music, see p. 39)

MUS. ED. 132. MUSIC IN SECONDARY SCHOOLS. (3)

June 21-July 30. Daily, 11:00-12:20; NN-304. A study of the vocal and instrumental programs in the secondary school. (Staff.)

MUS. ED. 175. METHODS AND MATERIALS IN VOCAL MUSIC FOR SECONDARY SCHOOLS. (3)

June 21-July 30. Daily, 2:00-3:20; NN-202. A survey of suitable vocal and choral repertoire for the high school, designed primarily for choral directors and teachers of voice classes. (Staff.)

MUS. ED. 180. INSTRUMENTAL MUSIC FOR SECONDARY SCHOOLS. (3)

June 21-July 30. Daily, 12:30-1:50; NN-116. A survey of repertoires for high school band. In the 1965 Summer Session new band literature will also be studied and performed. (Henderson, Staff.)

MUS. ED. 200. RESEARCH METHODS IN MUSIC AND MUSIC EDUCATION. (3)

June 21-July 30. Daily, 9:30-10:50; NN-202. The application of research methods to problems in the field. Preparation of bibliographies in the area of the student's major interest. (Grentzer.)

MUS. ED. 250. HISTORY AND AESTHETICS OF MUSIC EDUCATION. (3)

June 21-July 30. Daily, 11:00-12:20, NN-202. Prerequisite, permission of the instructor. The study of the development of pedagogical practices in music education, their aesthetic implications, and their educational values. (Grentzer.)

HUMAN DEVELOPMENT EDUCATION

H. D. ED. 105. ADOLESCENT DEVELOPMENT. (3)

June 21-July 30. Daily, 11:00; J-14. (Mershon.)

H. D. ED. 110. CHILD DEVELOPMENT III. (3)

June 21-July 30. Daily, 8:00; J-150. (Broome.)

H. D. ED. 112, 114. SCIENTIFIC CONCEPTS IN HUMAN DEVELOPMENT I, II. (3) (3)

June 21-July 30. Daily, 8:00-3:00; J-128. (Matteson, Kyle.)

H. D. ED. 113, 115. LABORATORY IN BEHAVIOR ANALYSIS I, II. (3) (3)

June 21-July 30. Daily, 8:00-3:00; J-302. (Matteson, Kyle.)

H. D. ED. 145. GUIDANCE OF YOUNG CHILDREN. (3)

June 21-July 30. Daily, 9:30; J-104. (Broome.)

H. D. ED. 200. INTRODUCTION TO HUMAN DEVELOPMENT AND CHILD STUDY. (3)

Section 1—June 21-July 30. Daily, 8:00; J-323. (Mershon.)

Section 2—June 21-July 30. Daily, 9:30; J-323. (Morgan.)

EDUCATION

- H. D. ED. 201. BIOLOGICAL BASES OF BEHAVIOR. (3)
 Section 1—June 21-July 30. Daily, 9:30; J-341. (Kurtz.)
 Section 2—June 21-July 30. Daily, 11:00; J-149. (Staff.)
- H. D. ED. 202. SOCIAL BASES OF BEHAVIOR. (3)
 Section 1—June 21-July 30. Daily, 8:00; J-341. (Morgan.)
 Section 2—June 21-July 30. Daily, 11:00; J-323. (Kurtz.)
- H. D. ED. 203. INTEGRATIVE BASES OF BEHAVIOR. (3)
 June 21-July 30. Daily, 8:00; J-347. (Peck.)
- H. D. ED. 211. PEER-CULTURE AND GROUP PROCESSES IN HUMAN DEVELOPMENT. (3)
 June 21-July 30. Daily, 9:30; J-347. (Peck.)
- H. D. ED. 212, 214. ADVANCED SCIENTIFIC CONCEPTS IN HUMAN DEVELOPMENT, I, II. (3) (3)
 June 21-July 30. Daily, 8:00-3:00; J-308. (Matteson, Kyle.)
- H. D. ED. 213, 215. ADVANCED LABORATORY IN BEHAVIOR ANALYSIS, I, II. (3) (3)
 June 21-July 30. Daily, 8:00-3:00; J-314. (Matteson, Kyle.)
- H. D. ED. 221. LEARNING THEORY AND THE EDUCATIVE PROCESS. (3)
 June 21-July 30. Daily, 8:00; J-355. (Perkins.)
- H. D. ED. 222. LEARNING THEORY AND THE EDUCATIVE PROCESS. II. (3)
 June 21-July 30. Daily, 9:30; J-355. (Perkins.)

INDUSTRIAL EDUCATION

- I. ED. 1. MECHANICAL DRAWING. (2)
 June 21-July 30. Daily, 9:30; P-208. Laboratory fee, \$5.00. (Guy.)
- I. ED. 21. MECHANICAL DRAWING. (2)
 June 21-July 30. Daily, 9:30; P-208. Laboratory fee, \$5.00. (Guy.)
- I. ED. 24. SHEET METAL WORK. (2)
 June 21-July 30. Daily, 11:00; P-116. Laboratory fee, \$5.00. (Gettle.)
- I. ED. 26. GENERAL METAL WORK. (3)
 June 21-July 30. Daily, 11:00; P-116. Laboratory fee, \$7.50. (Gettle.)
- I. ED. 84. ORGANIZED AND SUPERVISED WORK EXPERIENCES. (3)
 June 21-Aug. 13. Arranged for students enrolled in the curriculum Education for Industry. (Crosby, Guy.)
- I. ED. 124. ORGANIZED AND SUPERVISED WORK EXPERIENCES. (3)
 June 21-Aug. 13. Arranged for students enrolled in the curriculum Education for Industry. (Merril, Harrison.)

EDUCATION

- I. ED. 126. INDUSTRIAL TRAINING II. (3)
June 21-Aug. 13. M.T.Th.F., 8:00; P-221. (Merrill.)
- I. ED. 150. TRAINING AIDS DEVELOPMENT. (3)
June 21-July 30. Daily, 8:00; P-300. (Maley.)
- I. ED. 165. MODERN INDUSTRY. (3)
June 21-Aug. 13. M.T.Th.F., 9:30; P-306. (Harrison.)
- I. ED. 169. COURSE CONSTRUCTION. (2)
June 21-July 30. M.T.Th.F., 9:30; P-220. (Staff.)
- I. ED. 171. HISTORY OF VOCATIONAL EDUCATION. (2)
June 21-July 30, M.T.Th.F., 11:00; P-220. (Tierney.)
- I. ED. 175. RECENT TECHNOLOGICAL DEVELOPMENTS IN PRODUCTS AND PROCESSES. (3)
June 21-July 30. Daily, 11:00; P-221. (Crosby.)
- I. ED. 214. SCHOOL SHOP PLANNING AND EQUIPMENT SELECTION. (3)
June 21-July 30. Daily, 8:00; P-220. (Tierney.)
- I. ED. 241. CONTENT AND METHOD OF INDUSTRIAL ARTS. (3)
June 21-July 30. Daily, 11:00; P-306. (Maley.)
- I. ED. 250. TEACHER EDUCATION IN INDUSTRIAL ARTS. (3)
June 21-July 30. Daily, 9:30; P-221. (Luettkemeyer.)

LIBRARY SCIENCE EDUCATION

- L. S. ED. 122. BASIC REFERENCE AND INFORMATION SOURCES. (3)
June 21-July 16. 8:00-9:20 and 9:30-10:50; L-100. (E. Anderson.)
- L. S. ED. 126. CATALOGING AND CLASSIFICATION OF LIBRARY MATERIALS. (3)
July 19-Aug. 13. 8:00-9:20 and 9:30-10:50; L-100. (Staff.)
- L. S. ED. 130. LIBRARY MATERIALS FOR CHILDREN. (3)
July 19-Aug. 13. 11:00-12:20 and 1:30-2:50; L-100.
Printed and Audio-visual curriculum materials for the elementary school library. (E. Anderson.)
- ED. 189-8. WORKSHOP IN INSTRUCTIONAL MATERIALS. (3)
See page 20

SPECIAL EDUCATION

- SP. ED. 170. INTRODUCTION TO SPECIAL EDUCATION. (3)
June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-369. (Fouracre.)

EDUCATION

- SP. ED. 171. CHARACTERISTICS OF EXCEPTIONAL CHILDREN. (3)
A.—MENTALLY RETARDED
June 21-Aug. 13. M.T.Th.F., 9:30-10:50; J-361. (Renz.)
Prerequisite, Sp. Ed. 170.
- SP. ED. 173. CURRICULUM FOR EXCEPTIONAL CHILDREN. (3)
A.—MENTALLY RETARDED
June 21-Aug. 13. M.T.Th.F., 11:00-12:20; J-369. (Fouracre.)
Prerequisite, Sp. Ed. 171-A.
- SP. ED. 200. EXCEPTIONAL CHILDREN AND YOUTH. (3)
June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-371. (Huber.)
Prerequisite, consent of instructor.
- SP. ED. 205. THE EXCEPTIONAL CHILD AND SOCIETY. (3)
June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-361. (Renz.)
Prerequisite, Sp. Ed. 200 or consent of instructor.
- SP. ED. 235. PROBLEMS IN THE EDUCATION OF CHILDREN WITH
EMOTIONAL DISTURBANCES. (3)
June 21-Aug. 13. M.T.Th.F., 9:30-10:50; J-369. (Huber.)
Prerequisite, 9 hours Special Education including Sp. Ed. 200 or consent of
instructor.
- ED. 189-29. WORKSHOP—IN THE EDUCATION OF CHILDREN WITH
LEARNING IMPAIRMENTS. (4)
June 21-July 30. Daily, 8:30-12:00. (Simms.)
To be held off-campus. (See page 15)

ENGINEERING

CHEMICAL ENGINEERING

- CH. E. 15. CHEMICAL ENGINEERING ANALYSIS. (2)*
June 21-July 16. Daily, 9:30-10:50; U-112. Introduction to the methods of
chemical engineering analysis. Prerequisite, consent of the department. (Staff.)
- CH. E. 50. ENGINEERING THERMODYNAMICS. (2)*
July 19-Aug. 13. Daily, 9:30-10:50; U-112. Fundamental principles of thermo-
dynamics and their application to engineering problems. Prerequisite, consent of
the department. (Staff.)

*These two courses will be taught sequentially during the eight weeks session and students must enroll in both courses. Principally for transfer students and those with deficiencies to enable them to follow the regular Ch.E. Junior sequence in the fall.

ENGINEERING

- CH. E. 247. SPECIAL PROBLEMS IN CHEMICAL ENGINEERING. (3)
Arranged. (Staff.)
- CH. E. 314. SPECIAL PROBLEMS IN NUCLEAR ENGINEERING. (2 or 3)
Arranged. Laboratory fee, \$10.00.
- CH. E. 399. RESEARCH IN CHEMICAL ENGINEERING. (1-6)
Arranged. Credit according to work accomplished. Laboratory fee, \$8.00.
(Staff.)
- CH. E. 399. RESEARCH IN NUCLEAR ENGINEERING. (1-6)
Arranged. Credit according to work accomplished. Laboratory fee, \$10.00.
(Staff.)

CIVIL ENGINEERING

- C. E. 110. SURVEYING I. (3)
June 7-June 19. Daily, 8:00-3:30; J-154, J-156. Prerequisite: junior standing or consent of department head. Open only to students who have been enrolled in the College of Engineering. Principles and methods of making plane and topographic surveys. Use, care and adjustment of instruments. Consistent accuracy and systematic procedures in field work, computation, and mapping are emphasized for obtaining desired objectives. (Garber.)

ELECTRICAL ENGINEERING

- E. E. 1. BASIC ELECTRICAL ENGINEERING. (4)
June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-104, Sat., 8:00-10:50; S-5. Prerequisites, Math. 21, Physics 21, or concurrent registration. Laboratory fee, \$5.00. Required of sophomores in electrical engineering. Basic concepts of electric potential, current, power, and energy; circuit analysis by the mesh-current and nodal methods; network theorems. (Staff.)
- E. E. 100. ALTERNATING-CURRENT CIRCUITS. (4)
June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-6; Wed. 8:00-10:50; S-5. Prerequisites, Math. 21, Physics 21, and E.E. 1. Laboratory fee, \$5.00. Required of juniors in electrical engineering. Circuit analysis under sinusoidal and non-sinusoidal conditions of operation. Significance and use of the s-plane. (Staff.)
- E. E. 101. ENGINEERING ELECTRONICS. (4)
June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-10, Wed. 8:00-10:50; J-214. Prerequisite, E.E. 100. Required of juniors in electrical engineering. Laboratory fee, \$5.00. Circuit theory and applications of electron tubes and transistors; associated circuits with emphasis on equivalent-circuit and graphical analysis of linear amplifiers; theory of feedback amplifiers. (Staff.)
- E. E. 111. RADIO ENGINEERING. (4)
June 21-Aug. 13. M.T.Th.F., 9:30-10:50; J-10, Sat. 8:00-10:50; J-214. Prerequisites, E.E. 101, E.E. 108. Laboratory fee, \$5.00. Required of seniors in electrical engineering. Characteristics of radio-frequency circuits including the design of tuned coupled circuits and Class C amplifiers. Amplification, oscillation, modulation, and detection. (Staff.)

E. E. 118. ELECTRICAL ENERGY CONVERSION. (4)

June 21-Aug. 13. M.T.Th.F., 8:00-9:20; J-14, Sat. 8:00-10:50; S-2. Prerequisite, E.E. 100. Required of seniors in electrical engineering. Laboratory fee, \$5.00. The operating principles of alternating-current machinery considered from theoretical, design, and laboratory points of view; emphasis on energy conversion. (Staff.)

E. E. 115. FEEDBACK CONTROL SYSTEMS. (3)

June 21-Aug. 13. M.T.W.Th., 11:00-12:20; J-10. Prerequisites, E.E. 101 and E.E. 108. Servomechanisms and automatic regulators; investigation of electric, hydraulic, pneumatic, and mechanical elements; analysis of system differential equations and development of transfer function; stability criteria. (Staff.)

E. E. 116. FEEDBACK CONTROL SYSTEMS LABORATORY. (1)

June 21-Aug. 13. Fri. 8:00-10:50; S-5. Prerequisite, E.E. 115 or concurrent registration in E.E. 115. Laboratory fee, \$5.00. Laboratory exercises involving basic concepts of feedback control systems. (Staff.)

ENGINEERING SCIENCES

E. S. 10. MECHANICS. (4)

Section 1—M.T.W.Th.F., 8:00-9:20; J-352. Section 2—M.T.W.Th.F., 11:00-12:20; J-304. Prerequisites, E. S. 1; Math. 19 (or concurrent). Numerical, graphical and vectorial computation applied to elementary problems in mechanics. (Elkins.)

E. S. 20. MECHANICS OF MATERIALS. (3)

M.T.Th.F., 11:00-12:20; J-371. Prerequisite, Math. 20, Phys. 20 and E. S. 10. Distortion of engineering materials with application to beams, columns, shafts, tanks, trusses, and connections. (Jackson.)

E. S. 21. DYNAMICS. (3)

M.T.Th.F., 12:30-1:50; J-371. Prerequisites: E. S. 10, Math. 20, and Phys. 20 (or concurrent registration). Dynamics of particles and rigid bodies with applications to engineering problems. (Glass.)

MECHANICAL ENGINEERING

M. E. 1. THERMODYNAMICS I. (3)

M.T.W.Th.F., 8:00-9:20; J-201. Prerequisites, Phys. 20; Math. 21 concurrently. Required of sophomores in mechanical and aeronautical engineering. (Eylar.)

HOME ECONOMICS*FAMILY LIFE AND MANAGEMENT*

H. M. 50. DECISION MAKING IN FAMILY LIVING. (3)

June 21-July 30. 9:00-10:30; H-9. Decision making in relation to family values, philosophies, goals, and resources. (Staff.)

HOME ECONOMICS

H. M. 161. RESIDENT EXPERIENCE IN HOME MANAGEMENT. (3)

First group June 21-July 16; second group July 19-Aug. 13. Laboratory fee, \$10.00. A charge of \$40.00 for food and supplies is assessed each student. Students not living in dormitories are billed at the rate of \$5.00 a week for a room in the Home Management House. (Staff.)

F. L. 130. HOME MANAGEMENT AND FAMILY LIFE. (3)

July 12-July 30. 9:00-11:30; H-5. Study of factors influencing establishment and maintenance of satisfying interpersonal relations throughout the family life cycle as affected by management in the home. (Staff.)

H. E. 290d. SPECIAL PROBLEMS IN FAMILY LIFE. (2)

Aug. 2-Aug. 13. 9:00-11:30.

(Reiber.)

FOOD, NUTRITION, AND INSTITUTION ADMINISTRATION

F. & N. 5. FOOD AND NUTRITION OF INDIVIDUALS AND FAMILIES. (3)

June 21-July 16. 9:00-12:00; H-222. Consent of instructor. Laboratory fee, \$3.00. A study of the food and nutrition of contemporary peoples. The economic, social, esthetic, and nutritional implications of food. (Brown.)

F. & N. 130. SPECIAL PROBLEMS IN FOOD AND/OR NUTRITION. (1-3)

July 26-Aug. 13. H-223. Arranged. Consent of instructor. Problem may be in any one of several areas of food and nutrition with emphasis on concept approach in teaching. (Brown, Lemmon.)

FOOD 150. FOOD ECONOMICS AND MEAL MANAGEMENT. (3)

June 21-July 16. 9:00-12:00; H-203. Consent of department. Lecture and laboratory. Laboratory fee, \$10.00. Management of family meals through study of the distribution and marketing of food, and the management of time, energy, money, and other resources. (Lanz.)

I. A. 152. INSTITUTION FOOD. (3)

July 19-Aug. 13. H-203. Laboratory fee, \$10.00. Consent of instructor. Application of basic principles and procedures of food preparation to quantity food preparation with emphasis on comparative systems and theory of operation. (Brown.)

FOOD 399. THESIS RESEARCH. (1-6)

Arranged. Credit according to work accomplished.

(Staff.)

NUTRITION 399. THESIS RESEARCH. (1-6)

Arranged. Credit according to work accomplished.

(Staff.)

GENERAL HOME ECONOMICS

H. E. 190c. SPECIAL PROBLEMS IN HOME ECONOMICS. (1)

July 26-July 30. Md. room (Library). Arranged. Overview of trends and developments in the several areas of home economics. (Lippeatt.)

HOME ECONOMICS

- H. E. 201. METHODS OF RESEARCH IN HOME ECONOMICS. (3)
July 5-July 23. 9:00-11:30; H-9. Application of scientific methods to problems in the field of home economics. (Staff.)
- H. E. 202. INTEGRATIVE ASPECTS OF HOME ECONOMICS. (2)
June 21-July 2. 9:00-10:45; H-5. Scope and focus of total professional field with emphasis on purpose and functions as related to family and other group living. (Staff.)
- H. E. 290c. STATISTICAL PROBLEMS IN HOME ECONOMICS. (3)
June 28-July 19. 9:00-11:30; H-205. (Brown.)
- H. E. 399. THESIS RESEARCH. (1-6)
(Staff.)
- H. E. 190 a-h AND H. E. 290 a-h.
Offered by 12-months faculty only upon arranged basis. (Lippeatt.)

HOUSING AND APPLIED DESIGN

- A. D. 1. DESIGN. (3)
June 21-July 30. Daily, 8:00-9:20; H-101. Fee, \$3.00 Art expression through various media. (Roper.)
- H. A. D. 110. EXTERIOR-INTERIOR HOUSING DESIGN. (3)
June 2—July 16. 9:00-12:00; H-105. Prerequisite, H.A.D. 41. Laboratory fee, \$6.00.
An analysis of the works of contemporary architects and an overview of the field of architecture, relating the elements and principles to interiors. (Staff.)
- CRAFTS 2, 102. SIMPLE CRAFTS; CREATIVE CRAFTS. (2, 2)
June 21-July 16. 9:30-12:30; H-102. Consent of department. Laboratory fee, \$3.00. Interests and needs of persons enrolled will determine the crafts to be pursued. (Roper.)

TEXTILES AND CLOTHING

- CLO. 21. PATTERN DESIGN. (3)
June 21-July 16. 9:00-12:30; H-132. Prerequisite, Clo. 10 or consent of department. Laboratory fee, \$3.00. Pattern study, figure analysis, development and adaptation of individual basic pattern, creation of original designs. (Remington.)
- T. & C. 110. FIELD EXPERIENCE IN TEXTILES AND CLOTHING. (3)
June 21-Aug. 13. H-123. Arranged. Consent of department. Supervised and coordinated training-work program in cooperation with agencies and organizations. (Staff.)
- TEX. 200. SPECIAL STUDIES IN TEXTILES. (2-3)
July 5-23. H-305. Arranged. Advanced inquiry into uses, care, types and performance of textiles; compilation of data through testing, surveys, and field trips; writing of technical reports. Laboratory fee, \$3.00. (Lyle.)
- CLO. 220. SPECIAL STUDIES IN CLOTHING. (2-3)
July 19-Aug. 13. H-132. Arranged. Laboratory fee, \$3.00. Special areas of clothing are selected according to interest of student. (Mitchell.)

HOME ECONOMICS

T. & C. 399. THESIS RESEARCH. (1-6)

Arranged. Credit according to work accomplished.

(Staff.)

PHYSICAL EDUCATION, RECREATION AND HEALTH

P. E. S10. PHYSICAL EDUCATION ACTIVITIES. (1-4)

June 21-July 30. Not available for credit by physical education majors. Non-majors in physical education may use this credit to fulfill graduation requirements in physical education. Fee, \$6.00.

Section 1—Swimming (1) Daily, 11:00-11:50. Cole Pool.

Section 2—Golf (1) Daily, 12:30-1:20. Golf Range

(Staff.)

Section 3—Tennis (1) Daily, 12:30-1:20. Cole Courts

Section 4—Dance (1) Daily, 7:00-7:50 p.m. Cole Studio.

(Kramer.)

P. E. 100. KINESIOLOGY. (4)

June 21-July 30. Daily, 9:30-10:50, and arranged; GG-304. The study of human movement and the physical, mechanical and physiological principles upon which it depends.

(Kelley.)

P. E. 113. METHODS AND MATERIALS FOR SECONDARY SCHOOLS. (3)

June 21-July 30. Daily, 11:00-12:20; GG-205. Application of methods to teaching physical education activities, and materials that lend themselves to teaching.

(Husman.)

P. E. 120. PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL. (3)

June 21-July 30. 11:00-12:20; GG-310. Principles and practices will be presented and discussed along with appropriate activities for the various grade levels.

(Jones.)

P. E. 160. THEORY OF EXERCISE. (3)

June 21-July 30. Daily, 8:00-9:20; GG-205. A study of exercise and its physiological and kinesiological bases.

(Clarke.)

P. E. 180. MEASUREMENT IN PHYSICAL EDUCATION AND HEALTH. (3)

June 21-July 30. Daily, 8:00-9:20; GG-202. The application of the principles of techniques of educational measurement to teaching health and physical education.

(Kelley.)

P. E. 189. FIELD LABORATORY PROJECTS AND WORKSHOP. (1-6)

This course can be used for individual research projects under the guidance of an advisor. Arranged. Credit according to work accomplished.

(Staff.)

P. E. 189. PHYSICAL EDUCATION WORKSHOP. MODERN PHYSICAL ED. PROGRAM. (3-6)

(SKILLS TECHNIQUES)

June 21-July 30. Daily, 8:30-12:00 and 1:00-3:30; GG-160. A content workshop designed to give individual guidance on special problems regarding skills teaching and techniques.

(Hanson.)

P. E. 200. SEMINAR IN PHYSICAL EDUCATION, RECREATION AND HEALTH. (1)

Arranged. GG-205.

(Frale.)

PHYSICAL EDUCATION

P. E. 201. FOUNDATIONS IN PHYSICAL EDUCATION, RECREATION AND HEALTH. (3)

June 21-July 30. Daily, 9:30-10:50; GG-205. History, philosophy and principles of physical education, recreation and health as applied to current problems in each area and as related to general education. (Eyler.)

P. E. 205. ANALYSIS OF CONTEMPORARY ATHLETICS. (3)

June 21-July 30. Daily, 8:00-9:20; GG-128. Problems, practices and national issues of permanent importance to the conduct of competitive athletics. (Husman.)

P. E. 210. METHODS AND TECHNIQUES OF RESEARCH. (3)

June 21-July 30. Daily, 11:00-12:20; GG-128. Study of methods and techniques of research as applied to the special areas of physical education, recreation and health. (Eyler.)

P. E. 288. SPECIAL PROBLEMS IN PHYSICAL EDUCATION, RECREATION, AND HEALTH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

P. E. 290. ADMINISTRATIVE DIRECTION OF PHYSICAL EDUCATION, RECREATION AND HEALTH. (3)

June 21-July 30. Daily, 9:30-10:50; GG-202. Analysis of administrative problems in the light of sound educational practice. (Humphrey.)

P. E. 399. RESEARCH—THESIS. (1-5)

Arranged. Credits according to work accomplished. (Staff.)

HEALTH EDUCATION

HEA. 5. SCIENCE AND THEORY OF HEALTH. (2)

June 21-July 30. M.T.Th.F., 8:00-9:20; W-131. A study of the Science and theory of health and its importance to the health status of the individual. (Jones.)

HEA. 40. PERSONAL AND COMMUNITY HEALTH. (3)

June 21-July 30. Daily, 9:30-10:50. Meaning and significance of physical, mental, and social health as related to the individual and to society. (Jones.)

HEA. 105. BASIC DRIVER EDUCATION. (3)

June 21-July 30. Daily, 8:00-9:20; GG-201. The place of the automobile in modern life, including classroom and behind the wheel methods of instruction. (Tompkins.)

HEA. 145. ADVANCED DRIVER EDUCATION. (3)

June 21-July 30. Daily, 9:30-10:50; GG-201. Comprehensive programming for traffic safety, including training of young drivers and evaluating results. (Tompkins.)

HEA. 189. HEALTH EDUCATION WORKSHOP. (3-6)

(ADVANCEMENTS IN MODERN HEALTH AND HEALTH EDUCATION)
June 21-July 30, Daily 8:30-12:00. Concerned with most recent developments in human health and health education. (Johnson.)

PHYSICAL EDUCATION

HEA. 288. SPECIAL PROBLEMS IN PHYSICAL EDUCATION, RECREATION AND HEALTH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

HEA. 399. RESEARCH—THESIS. (1-5)

Arranged. Credit according to work accomplished. (Staff.)

RECREATION

REC. 189A. WORKSHOP IN PHYSICAL ACTIVITY IN RECREATION PROGRAMS FOR THE RETARDED. (3)

June 7-July 2. Daily, 9:00-3:00. (See page 21) (Johnson.)

REC. 189B. WORKSHOP IN SCHOOL RECREATION FOR EXCEPTIONAL CHILDREN. (4)

June 21-July 30. Daily, 12:30-3:30. (See page 22) (Johnson.)

The Faculty

SUMMER SESSION, 1965

June 21 - August 13

- ADDISON, HOWARD P., *Assistant Professor of Agricultural and Extension Education*
B.S., Purdue University, 1953; M.S., 1958.
- ADKINS, ARTHUR, *Associate Professor in Education*
A.B., St. Cloud Teachers College, 1942; M.A., University of Minnesota, 1947; Ph.D., 1953.
- AGRE, GENE P., *Assistant Professor of Education*
B.A., Macalester College 1951; B.S., University of Minnesota, 1953; M.A., 1956.
- ANDERSON, CHARLES R., *Instructor in Office Management and Techniques*
B.A., University of Maryland, 1957; M.Ed., 1959.
- ANDERSON, EVELYN J., *Assistant Professor of Library Science Education*
B.A., Bethany College, Lindsborg, Kansas, 1935; M. A., University of Chicago, 1957.
- ANDERSON, FRANK G., *Associate Professor of Sociology*
A.B., Cornell University, 1941; Ph.D., University of New Mexico, 1951.
- ANDERSON, HENRY, *Associate Professor of Statistics*
B.A., University of London, 1939; B.A., Columbia University, 1948; Ph.D., 1959.
- ANDERSON, J. PAUL, *Professor of Education*
B.S., University of Minnesota, 1942; M.A., 1947; Ph.D., 1960
- EVERY, WILLIAM T., *Professor and Head, Department of Classical Languages and Literatures*
- BAKER, DONALD J., *Assistant Professor of Speech and Dramatic Art*
B.S., Ohio State University, 1954; M.A., 1956; Ph.D. 1962.
- BARI, RUTH, *Instructor of Mathematics*
B.A., Brooklyn College, 1939; M.A., Johns Hopkins University, 1943.
- BARTLETT, HALE C., *Assistant Professor of Transportation*
B.S., University of Illinois, 1955; M.B.A., University of Michigan, 1959; Ph.D., 1964.
- BATKA, GEORGE F., *Associate Professor of Speech and Dramatic Art*
B.A., Wichita University, 1938; M.A., University of Michigan, 1941.
- BERMAN, JOEL H., *Assistant Professor of Music*
B.S., Juilliard School of Music, 1951; M.A., Columbia University, 1953; D.M.A., University of Michigan, 1961.

FACULTY

- BERNSTEIN, MELVIN, *Assistant Professor of Music*
A.B., Southwestern at Memphis, 1947; B.Mus., 1948; M.Mus., University of Michigan, 1949; M.A., University of North Carolina, 1954; Ph.D., 1964.
- BICKLEY, WILLIAM E., *Professor and Head of Entomology*
B.S., University of Tennessee, 1934; M.S., 1936; Ph.D., University of Maryland, 1940.
- BIRDALL, ESTHER K., *Assistant Professor of English*
B.S., Central Michigan College, 1947; M.A., University of Arizona, 1950; Ph.D., University of Maryland, 1958.
- BLAHA, M. JAY, *Visiting Lecturer in Education*
B.E., St. Cloud State College, Minnesota, 1930; M.A., University of Washington, Seattle, 1939; Ph.D., University of Washington, Seattle, 1941.
- BLOUGH, GLENN O., *Professor of Education*
B.A., University of Michigan, 1929; M.A., 1932; LL.D., Central Michigan College of Education, 1950.
- BOTT, MARGARET, *Assistant Professor of Education and Counselor in Counseling Center*
B.A., St. John's University, 1952; M.S., Hunter College, 1959; Ph.D., Michigan State University, 1962.
- BOWIE, B. LUCILE, *Associate Professor of Education, Institute for Child Study*
B.S., University of Maryland, 1942; M.A., Teachers College, Columbia University, 1946; Ed.D., University of Maryland, 1957.
- BRANDT, RICHARD M., *Associate Professor of Education, Institute for Child Study*
B.M.E., University of Virginia, 1943; M.A., University of Michigan, 1949; Ed.D., University of Maryland, 1954.
- BROOME, ELEANOR A., *Instructor in Education, Institute for Child Study*
B.A., University of Maryland, 1943; M.Ed., 1957
- BROWN, DALE W., *Assistant Professor of Education*
B.A., David Liscomb College, 1953; M.A., George Peabody College for Teachers, 1955.
- BROWN, HELEN I., *Associate Professor and Head of Department of Food, Nutrition and Institution Administration*
B.S., University of Vermont, 1938; M.A., Columbia University, 1948; Ph.D., Michigan State University, 1960.
- BROWN, LILLIAN W., *Instructor in Early Childhood Education (part-time)*
B.A., Lake Erie College, 1930.
- BRYAN, CARTER R., *Associate Professor of Journalism*
B.A., University of California, 1937; Ph.D., University of Vienna, Austria, 1940.

- BRYAN, MARIE D., *Associate Professor of Education*
B.A., Goucher College, 1923; M.A., University of Maryland, 1945.
- BYRD, ELBERT M., JR., *Associate Professor of Government and Politics*
B.S., American University, 1953; M.A., 1954; Ph.D., 1959.
- BYRNE, RICHARD H., *Professor of Education and Project Director, Inter-professional Research Commission on Pupil Personnel Services*
B.A., Franklin and Marshall College, 1938; M.A., Columbia University, 1947; Ed.D., 1952.
- CAIRNS, GORDON M., *Dean of Agriculture and Professor of Dairy Husbandry*
B.S., Cornell University, 1936; M.S., 1938; Ph.D., 1940.
- CHARLES E. CALHOUN, *Professor of Finance*
A.B., University of Washington, 1925; M.B.A., 1930.
- CAP, JEAN-PIERRE, *Instructor of Foreign Languages*
B.A., Temple University, 1957; M.A., 1960; M.A., University of Pennsylvania, 1960.
- CARDOZIER, VIRGUS R., *Professor and Head of Agricultural and Extension Education*
B.S., Louisiana State University, 1947; M.S., 1950; Ph.D., Ohio State University, 1952.
- CARTER, JOHN F., *Instructor of Speech and Dramatic Art*
B.S., Maryland State Teachers College, 1953; M.A., University of Maryland, 1958.
- CARROLL, STEPHEN J., *Assistant Professor*
B.S., University of California, Los Angeles, 1957; M.A., University of Minnesota, 1959; Ph.D., 1964.
- CARRUTHERS, JOHN T., *Assistant Professor of Chemistry*
- CELARIER, J. L., *Assistant Professor of Philosophy*
B.A., University of Illinois, 1956; M.A., University of Illinois, 1958; Ph.D., University of Pennsylvania, 1960.
- CHAVES, ANTONIO, *Associate Professor*
M.A., Northwestern University, 1948; D.Litt., University of Habana, 1941; Ph.D., University of Habana, 1946.
- CHEN, CHUNJEN C., *Assistant Professor of Foreign Languages*
B.S., Cornell University, 1919; M.S., University of Maryland, 1920.
- CHURCHILL, JOHN W., *Assistant Professor of Recreation*
B.S., State University of New York Cortland; 1958; M.S., University of Illinois, 1959.
- CLARKE, DAVID H., *Associate Professor of Physical Education*
B.S., Springfield College, 1952; M.S., 1953; Ph.D. University of Oregon, 1959.

FACULTY

COLLINS, JAMES F., *Assistant Professor in Education*

B.Ed., University State College, New York, 1949; M.S., University State College, New York, 1953.

COOLEY, FRANKLIN D., *Professor of English*

B.A., The Johns Hopkins University, 1927; M.A., University of Maryland, 1933; Ph.D., The John Hopkins University, 1940.

COMBS, GERALD F., *Professor of Poultry Science*

B.S., University of Illinois, 1940; Ph.D., Cornell University, 1948.

COMPTON, NORMA H., *Visiting Professor*

B.S., George Washington University, 1950; M.S., University of Maryland, 1957; Ph.D., 1962.

CONWAY, MARY MARGARET, *Lecturer in Government and Politics*

B.S., Purdue University, 1957; M.A., University of California, 1960.

CORREL, ELLEN, *Associate Professor of Mathematics*

B.S., Douglass College (Rutgers University), 1951; M.S., Purdue University, 1953; Ph.D., 1957.

CROSBY, EDMUND D., *Assistant Professor of Industrial Education*

B.A., Western Michigan University, 1934; M.A., Colorado A. & M. College, 1941.

CROWELL, ALFRED A., *Professor and Head of Journalism*

A.B., University of Oklahoma, 1929; M.A., 1934; M.S.J., Northwestern University, 1940.

CURTIS, JOHN M., *Professor and Head, Agricultural Economics*

B.S., North Carolina State University, 1947; M.S., 1950; Ph.D., University of Maryland, 1961.

DAIKER, JOHN A., *Assistant Professor of Accounting*

B.S., University of Maryland, 1941; C.P.A., District of Columbia, 1944; M.B.A., 1951.

DAVIS, RICHARD E., *Professor and Head of Dairy Science*

B.S., University of New Hampshire, 1950; M.S., Cornell University, 1952; Ph.D., 1953.

DAWSON, TOWNES L., *Associate Professor of Business Law*

B.B.A., University of Texas, 1943; B.A., U. S. Merchant Marine Academy, 1946; M.B.A., University of Texas, 1947; Ph.D., 1950; LL.B., 1954.

DAYTON, CHAUNCEY M., *Assistant in Education*

A.B., University of Chicago, 1955; M.A., University of Maryland, 1963; Ph.D., 1964.

DIBELLA, EDWARD, *Assistant Professor of Sociology*

B.S., Washington University, 1936; M.A., 1938; Ph.D., Catholic University, 1963.

- DE BERUFF, ELLEN, *Instructor in Education*
B.A., University of Maryland, 1961.
- DETENBECK, ROBERT L., *Assistant Professor of Physics*
B.S., University of Rochester, 1954; Ph.D., Princeton, 1963.
- DEMAITRE, ANN, *Instructor of Foreign Languages*
B.A., Columbia University, 1950; M.A., University of California, 1951; M.S., Columbia University, 1952.
- DI LAVORE, PHILIP, III, *Assistant Professor of Physics and Education*
B.A., Dakota Wesleyan University, 1954; M.S., University of Michigan, 1961; Ph.D., University of Michigan, 1964.
- DILLON, CONLEY H., *Professor of Government and Politics*
B.A., Marshall College, 1928; M.A., Duke University, 1933; Ph.D., 1936.
- DUDLEY, JAMES, *Assistant Professor of Elementary School Administration and Supervision*
Ed.D., University of Illinois, 1964; M.S., 1957; B.A., 1951.
- DUFFEY, ROBERT V., *Professor and Head, Early Childhood-Elementary Education*
B.S., Millersville State College, 1938; M.Ed., Temple University, 1948; Ed.D., Temple University, 1954.
- EDELSON, CHARLES B., *Assistant Professor of Accounting*
B.B.A., University of New Mexico, 1949; M.B.A., Indiana University, 1950; C.P.A., Maryland, 1951.
- EHRLE, RAYMOND A., *Rehabilitation Counselor Training Coordinator and Lecturer in Education*
A.B., Syracuse University, 1951; M.A., George Washington University, 1956; Ed.D., University of Missouri, 1961.
- EHRlich, GERTRUDE, *Associate Professor of Mathematics*
B.S., Georgia State College for Women, 1943; M.A., University of North Carolina, 1945; Ph.D., University of Tennessee, 1953.
- ELKINS, RICHARD LONSDALE, *Assistant Professor of Mechanical Engineering*
B.S., University of Maryland, 1953; M.A., 1958.
- ERICKSON, HOWARD R., *Visiting Lecturer*
B.S., Indiana State Teachers College, 1952; M.S., Pennsylvania State University, 1956; Ph.D., Cornell University, 1959.
- EYLER, ADDISON BERNARD, *Associate Professor of Mechanical Engineering*
B.S., University of Maryland, 1947; M.S., 1950.
- EYLER, MARVIN H., *Professor Physical Education*
B.A., Houghton College, 1942; M.S., University of Illinois, 1948; Ph.D., 1956.

FACULTY

- FABER, JOHN E., *Professor and Head of the Department of Microbiology*
B.S., University of Maryland, 1926; M.S., 1927; Ph.D., 1937.
- FANOS, STAVROULA, *Instructor in Music*
B.Mus.Ed., Oberlin College, 1957; Ed.M., University of Maryland, 1963.
- FERRIS, CLIFFORD DURAS, *Associate Professor of Electrical Engineering*
B.S., University of Pennsylvania, 1957; M.S., 1958; D.Sc., The George Washington University, 1962.
- FICKEN, ROBERT W., *Assistant Professor of Zoology*
B.S., Cornell University, 1953; Ph.D., 1960.
- FISHER, JOHN K., *Staff Associate, Interprofessional Research Commission on Pupil Personnel Services*
B.A., Alfred University, 1952; M.S., Alfred University, 1953; Ed.D. University of Maryland, 1964.
- FOLSOM, KENNETH E., *Assistant Professor of History*
A.B., Princeton University, 1943; A.B., University of California, 1955; M.A., 1957; Ph.D., 1964.
- FOSTER, JOHN E., *Professor and Head of Animal Science*
B.S., North Carolina State College, 1926; M.S., Kansas State College, 1927; Ph.D., Cornell University, 1937.
- FOURACRE, MAURICE H., *Lecturer in Special Education*
B.A., University of Michigan, 1935; M.A., 1940; Ph.D., 1942.
- FRALEY, LESTER M., *Dean of College of Physical Education, Recreation and Health*
A.B., Randolph-Macon College, 1928; M.A., Peabody College, 1937; Ph.D., 1939.
- FRANK, ALLAN D., *Assistant Professor of Education and Speech, Department of Secondary Education*
B.S., University of Wisconsin, 1953; M.A., University of Wisconsin, 1954.
- FREDERICKSON, H. GEORGE, *Lecturer in Government and Politics*
B.S., Brigham Young University, 1959; M.P.A., University of California at Los Angeles, 1961.
- FREENY, RALPH D., *Instructor of Art*
B.A., University of Maryland, 1960.
- GALLAGHER, CHARLES, *Instructor in Music*
B.Mus., University of Michigan, 1950; M.Mus., 1952.
- GARBER, DANIEL LEEDY, JR., *Assistant Professor in Civil Engineering*
B.S., University of Maryland, 1952; M.S., 1959; Ph.D., 1964.
- GATELL, FRANK O., *Assistant Professor of History*
B.A., The City College of New York, 1956; M.A., Harvard University, 1958; Ph.D., 1960.

- GERACI, PHILIP C., *Lecturer in Journalism*
B.S., University of Maryland 1953; M.A., 1961.
- GERBERICH, J. RAYMOND, *Visiting Professor in Education (part-time)*
B.A., M.A., Ph.D., University of Iowa, 1922, 1928 and 1929.
- GETTLE, KARL E., *Instructor of Industrial Education*
B.S., Millersville State College, Millersville, Pennsylvania, 1959.
- GINNINGS, ROBERT MEADE, *Instructor in Electrical Engineering*
B.S., University of Maryland, 1958; M.S., 1960.
- GLASS, ROBERT JAMES, *Instructor of Mechanical Engineering*
B.S. in M.E., Yale University, 1952; M.S. in M.E. George Washington University.
- GLOCK, RUSSELL, JR., *Instructor in Electrical Engineering*
B.S., University of Maryland, 1959.
- GOERING, JACOB D., *Assistant Professor of Education, Institute for Child Study*
B.A., Bethel College, 1941; B.D., Bethany Seminary, 1949; Ph.D., University of Maryland, 1959.
- GOOD, RICHARD A., *Professor of Mathematics*
B.A., Ashland College, 1939; M.A., University of Wisconsin, 1940; Ph.D., University of Wisconsin, 1945.
- GORDON, DONALD C., *Professor of History*
A.B., College of William and Mary, 1934; M.A., Columbia University, 1937; Ph.D., 1947.
- GRAMBS, JEAN D., *Associate Professor of Education*
B.A., Reed College, 1940; M.A., Stanford University, 1941; Ed.D., 1948.
- GRAVELY, WILLIAM H., JR., *Associate Professor of English*
B.A., College of William and Mary, 1925; M.A., University of Virginia, 1934; Ph.D., 1953.
- GREEN, ROBERT L., *Professor and Head of Agricultural Engineering*
B.S.A.E., University of Georgia, 1934; M.S., Iowa State College, 1939; Ph.D., Michigan State University, 1953. Registered Professional Engineer.
- GREENBERG, KENNETH R., *Assistant Professor of Education*
B.S., Ohio State University, 1951; M.A., 1952; Ph.D., Western Reserve University, 1960.
- GRENTZER, ROSE MARIE, *Professor of Music*
B.A., Mus.Ed., Carnegie Institute of Technology, 1935; B.A., Music, 1936; M.A., 1939.
- GRUBAR, FRANCIS S., *Assistant Professor of Art*
B.A., University of Maryland, 1948; M.A., 1949; M.A., Johns Hopkins University, 1952.

FACULTY

- GUY, KENNETH H., *Instructor of Industrial Education*
B.S., State University of New York, Buffalo, 1959; M.S., 1962.
- HANSON, DALE L., *Associate Professor of Physical Education*
B.A., St. Olaf College, 1952; M.S., Mankato State College, 1956; Ph.D., Michigan State University, 1962.
- HANUS, JEROME J., *Lecturer in Government and Politics*
B.A., Seattle University, 1959; M.A., University of Washington, 1961.
- HARRISON, HORACE V., *Professor of Government and Politics*
B.A., Trinity University, Texas, 1932; M.A., University of Texas, 1941; Ph.D., 1951.
- HARRISON, PAUL E., JR., *Professor of Industrial Education*
B.Ed., Northern Illinois State College, 1942; M.A., Colorado State College, 1947; Ph.D., University of Maryland, 1955.
- HATFIELD, AGNES BERQUIST, *Assistant Professor of Education, Institute for Child Study*
Ph.D., University of Denver, 1959; M.A., 1954; B.A., 1948.
- HATHORN, GUY B., *Associate Professor of Government and Politics*
B.A., University of Mississippi, 1940; M.A., 1942; Ph.D., Duke University, 1950.
- HEBELER, JEAN R., *Associate Professor of Education and Coordinator of Special Education Program.*
B.S., State University of New York, College for Teachers, 1953; M.S., University of Illinois, 1956; Ed.D., Syracuse University, 1960.
- HEIM, NORMAN, *Assistant Professor of Music*
B.Mus.Ed., Evansville College, 1951; M.Mus., Eastman School of Music, 1952; D.M.A., 1962.
- HELBACKA, NORMAN V., *Associate Professor, Poultry Marketing*
B.S., University of Minnesota, 1952; M.S., 1954; Ph.D., 1956.
- HENDERSON, HUBERT, *Associate Professor of Music and Director of University Bands*
B.A., University of North Carolina, 1941; M.A., 1950; Ph.D., 1961.
- HENDRICKS, RICHARD, *Professor of Speech and Dramatic Art*
B.A., Franklin College, 1937; M.A., Ohio State University, 1939; Ph.D., 1956.
- HENERY-LOGAN, KENNETH R., *Assistant Professor of Chemistry*
B.S., McGill University, 1942; Ph.D., McGill University, 1946.
- HENKELMAN, JAMES H., *Assistant Professor, Department of Secondary Education and Department of Mathematics*
B.S., Miami University, Oxford, Ohio, 1954; M.Ed., 1955.
- HENNEY, DAGMAR R., *Instructor of Mathematics*
B.S., University of Miami, 1954; M.S., University of Miami, 1956.

- HERDOIZA, EULALIA J., *Instructor of Foreign Languages*
B.A., Manuela Canizares, 1954; M.A., University of Maryland, 1960.
- HERING, CHRISTOPH A., *Associate Professor of Foreign Languages*
Ph.D., University of Bonn, 1950.
- HERMANSON, ROGER H., *Assistant Professor of Accounting*
B.A., Michigan State University, 1954; M.A., 1955; Ph.D., 1963.
- HETRICK, FRANK M., *Assistant Professor of Microbiology*
B.S., Michigan State University, 1954; M.S., University of Maryland, 1960; Ph.D., 1962.
- HIRZEL, ROBERT K., *Associate Professor of Sociology*
B.A., Pennsylvania State College, 1944; M.A., 1930; Ph.D., Louisiana State University, 1954.
- HITCHCOCK, DONALD, *Assistant Professor of Foreign Languages*
B.A., University of Maryland, 1962; M.A., Harvard University, 1954.
- HOVET, KENNETH O., *Professor of Education*
B.A., St. Olaf College, 1926; Ph.D., University of Minnesota, 1950.
- HOVEY, RICHARD B., *Associate Professor of English*
B.A., University of Cincinnati, 1942; M.A., Harvard University, 1943; Ph.D., 1950.
- HOWARD, JOHN D., *Instructor of English*
B.A., Washington College, 1956; M.A., University of Maryland, 1962.
- HUBER, FRANZ E., *Assistant Professor of Education in Special Education*
B.A., 1951; M.A., 1953; Ph.D. 1964. University of Michigan.
- HUMPHREY, JAMES H., *Professor of Physical Education*
A.B., Denison College, 1953; A.M., Western Reserve University, 1946; Ed.D., Boston University, 1951.
- HUSMAN, BURRIS F., *Associate Professor of Physical Education*
B.S., University of Illinois, 1941; M.S., 1948; Ph.D., University of Maryland, 1954.
- HYMES, JAMES L., JR., *Professor of Education*
B.A., Harvard College, 1934; M.A., Teachers College, Columbia University, 1936; Ed.D., 1947.
- JACKLIN, ROBERTA, *Visiting Professor*
B.S., University of Missouri; Ph.D., Cornell University.
- JACKSON, JOHN WARREN, *Professor of Mechanical Engineering*
B.S., University of Cincinnati, 1934; M.E., 1937; M.S., California Institute of Technology, 1940; Registered Professional Engineer.
- JACOBSON, JOHN A., *Lecturer in Government and Politics*
B.A., Adelphi College, 1959.

FACULTY

- JAMES, EDWARD F., *Instructor of English*
B.A., University of Maryland, 1954; M.A., 1955.
- JANES, ROBERT W., *Professor of Sociology*
B.A., University of Chicago, 1938; M.A., 1939; Ph.D., University of Illinois, 1942.
- JAQUITH, RICHARD H., *Associate Professor of Chemistry*
B.S., University of Massachusetts, 1940; M.S., 1942; Ph.D., Michigan State University, 1955.
- JOHNSON, WARREN R., *Professor of Health Education*
A.B., University of Denver, 1942; M.A., 1947; Ed.D., Boston University, 1950.
- JONES, HERBERT L., *Assistant Professor of Health Education*
B.S., Wisconsin State College, 1954; M.S., University of Wisconsin, 1957; H.S.D., Indiana University, 1964.
- JONES, ARTHUR R., JR., *Assistant Professor of Sociology*
B.A., Baylor University, 1959; Ph.D., Louisiana State University, 1964.
- KANSTOROOM, EMILY S., *Instructor of Speech and Dramatic Art*
B.A., University of Maryland, 1960; M.A., 1962.
- KELLEY, DAVID L., *Assistant Professor of Physical Education*
B.S., San Diego State College, 1957; M.S., University of Southern California, 1958; Ph.D., 1962.
- KELLY, VINCENT P., *Assistant Professor, Department of Secondary Education and Department of Foreign Languages*
B.A., Manhattan College, 1955; M.A., Hunter College, 1958.
- KELSEY, ROGER R., *Associate Professor in Education*
B.A., St. Olaf College, 1934; M.A., University of Minnesota, 1940; Ed.D., George Peabody College for Teachers, 1954.
- KEMNER, MARGARETHE M., *Instructor of Foreign Languages*
Abitur, Annette-v.-Droste Hulshoff Munster, 1944; M.A., University of Detroit, 1954; M.A., University of Oklahoma, 1962.
- KIM, JUNG GUN, *Lecturer in Government and Politics*
B.A., University of Kansas City, 1958; M.A., George Washington University, 1961.
- KLEVAN, ALBERT, *Assistant Professor of Education*
B.S., Temple University, 1948; M.Ed., 1950; Ed.D., New York University, 1957.
- KOZAKOFF, EMILY, *Instructor of Mathematics*
B.S., University of Miami, 1960; M.S., University of Miami, 1961.
- KRAMER, GEORGE F., *Assistant Professor of Physical Education*
B.S., University of Maryland, 1953., M.A., 1956.
- KURTZ, JOHN J., *Professor of Education, Institute for Child Study*
B.A., University of Wisconsin, 1935; M.A., Northwestern University, 1940; Ph.D., University of Chicago, 1947.

- KYLE, DAVID G., *Assistant Professor of Education, Institute for Child Study*
B.A., University of Denver, 1952; M.A., 1953; Ed.D., University of Maryland, 1961.
- LANZ, SALLY J., *Instructor in Food and Nutrition*
B.S., Albright College, 1956; M.S., Pennsylvania State University, 1960.
- LARSON, JEROME VALJEAN, *Instructor in Electrical Engineering*
B.S., University of Maryland, 1960; M.S., 1963.
- LAWSON, JOHN R., *Assistant Professor of Education, Institute for Child Study*
B.A., Long Beach State College, 1958; M.A., 1959; Ed.D., University of Nebraska, 1962.
- LEHNER, GUYDO R., *Associate Professor of Mathematics*
B.S., Loyola of Chicago, 1951; M.S., University of Wisconsin, 1951; Ph.D. University of Wisconsin, 1957.
- LEJINS, PETER P., *Professor of Sociology*
Magister Philosophiae, University of Latvia, 1910; Magister Iuris, 1933; Ph.D., University of Chicago, 1938.
- LEMBACH, JOHN, *Professor of Art*
B.A., University of Chicago, 1934; M.A., Northwestern University, 1937; Ed.D., Columbia University, 1946.
- LEMMON, LOUISE, *Associate Professor, Department of Secondary Education and College of Home Economics*
B.S., Northern Illinois University, 1945; M.S., University of Wisconsin, 1951; Ed.D., University of Illinois, 1962.
- LEPSON, INDA, *Instructor of Mathematics*
B.A., New York University, 1941; M.A., Columbia University, 1945.
- LIDDLE, GORDON P., *Lecturer in Education, Associate Director, Interprofessional Research Commission on Pupil Personnel Services*
A.B., Oberlin College, 1947; Ph.D., University of Chicago, 1959.
- LINDER, HARRIS J., *Associate Professor of Zoology*
B.S., Long Island University, 1951; M.S., Cornell University, 1955; Ph.D., 1958.
- LINDSAY, RAO HUMPHREYS, *Assistant Professor of Education*
Ph.D., University of Michigan, 1964; M.A., 1958; B.A., 1954.
- LINK, CONRAD B., *Professor of Floriculture*
B.S., Ohio State University, 1933; M.S., 1934; Ph.D. 1940.
- LINKOW, IRVING, *Associate Professor of Speech and Dramatic Art*
B.A., University of Denver, 1937; M.A., 1938.
- LIPPEATT, SELMA F., *Professor of Home Economics and Dean of the College of Home Economics*
B.S., Arkansas State Teachers College, 1938; M.S., University of Tennessee, 1945; Ph.D., Pennsylvania State University, 1953.

FACULTY

- LOCKARD, J. DAVID, *Associate Professor of Botany and Education*
B.S., Pennsylvania State College, 1951; M.Ed., Pennsylvania State University, 1955; Ph.D., 1962.
- LONGLEY, E. L., JR., *Assistant Professor of Art and Education*
B.A., University of Maryland, 1950; M.A., Columbia University, 1953.
- LUETKEMEYER, JOSEPH, *Assistant Professor of Industrial Education*
B.S., Stout State College, 1953; M.S., 1954; Ed.D., University of Illinois, 1961.
- LUTWACK, LEONARD I., *Associate Professor of English*
B.A., Wesleyan University, 1939; M.A., 1940; Ph.D., Ohio State University, 1950.
- LU MAR, SHUH-YIN, *Instructor of Mathematics*
B.A., Ginling College, 1928; M.S., Mount Holyoke, 1932.
- LYLE, DOROTHY S., *Visiting Professor of Textiles*
B.S., Valparaiso University, 1932; M.S., Ohio State University, 1933; Ph.D., Pennsylvania State University, 1946.
- MALEY, DONALD, *Professor and Head, Industrial Education*
B.S., State Teachers College, California, Pennsylvania, 1943; M.A., University of Maryland, 1947; Ph.D., 1950.
- MARCOVITZ, ALAN BERNARD, *Assistant Professor of Electrical Engineering*
S.B., Massachusetts Institute of Technology, 1959; S.M., 1959; Ph.D., Columbia University, 1963.
- MARX, GEORGE L., *Associate Professor of Education*
B.A., Yankton College, South Dakota, 1953; M.A., State University of Iowa, 1956; Ph.D., 1959.
- MATTESON, RICHARD L., *Assistant Professor of Education, Institute for Child Study*
B.A., Knox College, 1952; M.A., University of Maryland, 1956; Ed.D., 1962.
- MCFARLANE, WILLIAM, *Assistant Professor of Chemistry*
B.A., Cambridge University, 1960; M.A., 1964; Ph.D., University of London, 1963.
- MCNELLY, THEODORE H., *Associate Professor of Government and Politics*
B.S., University of Wisconsin, 1941; M.A., 1942; Ph.D., Columbia University, 1952.
- MECKLER, ALVIN, *Lecturer in Physics*
B.S., City College of New York, 1947; Ph.D., Massachusetts Institute of Technology, 1952.
- MEERSMAN, ROGER L., *Instructor of Speech and Dramatic Art*
B.A., St. Ambrose College, 1952; M.A., University of Illinois, 1959; Ph.D., 1962.
- MERRILL, GEORGE R., *Assistant Professor of Industrial Education*
B.S., University of Maryland, 1954; M.E., 1955; Ed.D., 1964.

- MERSHON, MADELAINE J., *Professor of Education, Institute for Child Study*
B.S., Drake University, 1940; M.A., University of Chicago, 1943; Ph.D., 1950.
- MEYER, CHARLTON, *Assistant Professor of Music*
B.Mus., Curtis Institute of Music, 1952.
- MIKA, PAUL J., *Assistant Professor*
A.B., University of Pittsburgh, 1954; M.A., George Washington University, 1958.
- MILLER, JAMES R., *Professor and Head of Agronomy*
B.S., University of Maryland, 1951; M.S., 1953; Ph.D., 1956.
- MILLER, ROBERT L., *Assistant Professor of Foreign Languages*
B.A., Wayne University, 1952; M.A., University of Michigan, 1954; Ph.D., 1963.
- MILLS, ESTHER B., *Instructor in Special Education*
B.S., 1937, Wayne State University; M.Ed., 1959, University of Maryland.
- MISH, CHARLES C., *Associate Professor of English*
B.A., University of Pennsylvania, 1936; M.A., 1946; Ph.D., 1951.
- MONCAYO, ABLARDO, *Instructor of Foreign Languages*
B.A., Colegio Americano de Quito, 1954; Licenciado, Central University of Ecuador, 1961.
- MONTGOMERY, WILLIAM, *Instructor in Music*
B.Mus.Ed., Cornell College, 1953; M.Mus., Catholic University, 1957.
- MORAN, JAMES E., *Lecturer in Government and Politics*
B.A., Conception College, 1956; B.A., Rockhurst College, 1960; M.A., University of Missouri, 1961.
- MORGAN, H. GERTHON, *Professor of Education and Director, Institute for Child Study*
B.A., Furman University, 1940; M.A., University of Chicago, 1943; Ph.D., 1946.
- MURPHY, CHARLES D., *Professor and Head of English*
B.A., University of Wisconsin, 1929; M.A., Harvard University, 1930; Ph.D., Cornell University, 1940.
- MYERS, ROBERT MANSON, *Associate Professor of English*
B.A., Vanderbilt University, 1941; M.A., Columbia University, 1942; M.A., Harvard University, 1943; Ph.D., Columbia University, 1948.
- NELSON, BOYD L., *Professor of Statistics*
B.A., University of Wisconsin, 1947; M.A., 1948; Ph.D., 1952.
- NEVILLE, RICHARD F., *Associate Professor of Education*
Ph.D., University of Connecticut, 1963; M.A., 1957; B.S., 1953.
- NEWELL, CLARENCE A., *Professor of Educational Administration*
B.A., Hastings College, Nebraska, 1935; M.A., Columbia University, 1939; Ph.D., 1943.

FACULTY

- NEWSON, D. EARL, *Professor of Journalism and Sequence Director*
B.S., Oklahoma State University, 1948; M.S.J., Northwestern University, 1940;
Ed.D., Oklahoma State University, 1957.
- NOALL, WILLIAM F., *Assistant Professor of Journalism*
B.S., Kent State University, 1957; M.S., Ohio University, 1960.
- NOLL, JAMES W., *Assistant Professor of Education*
Ph.D., University of Chicago, 1964; M.S., 1961; B.A., 1954.
- O'CONNELL, GEORGE, *Assistant Professor of Art*
B.S., University of Wisconsin, 1950; M.S., 1951.
- OLSON, RONALD L., *Assistant Professor*
B.S., Shippensburg State College, 1960; M.B.A., Indiana University, 1962; D.B.A.,
1964. C.P.A., Indiana, 1964.
- O'NEILL, JANE H., *Instructor in Office Techniques*
B.A., University of Maryland, 1932.
- O'NEILL, LEO W., *Professor of Education*
B.A., University of Chicago, 1938, M.A., University of Kansas City, 1953; Ed.D.,
University of Colorado, 1955.
- OSTLING, ACTON, *Instructor in Music*
B.Mus., University of Michigan, 1958; M.Mus., 1959.
- PANCELLA, JOHN, *Instructor in Secondary Education*
B.S., State Teachers College, Indiana, Pennsylvania, 1953; M.S., University of
Maryland.
- PECK, BERNARD, *Associate Professor of Education, Institute for Child Study*
B.A., Indiana University, 1939; M.A., Columbia University, 1941; Ed.D., Univer-
sity of Maryland, 1957.
- PEDELTY, MICHAEL JOHN, *Instructor in Electrical Engineering*
B.Sc., University of London, 1958; M.S., Case Institute of Technology, 1960.
- PENNINGTON, KENNETH D., *Assistant Professor of Music*
B.A., Friends University, 1949; B.Mus., 1950; M.A., New York University, 1953;
D.Mus., Indiana University, 1961.
- PERKINS, HUGH V., *Professor of Education, Institute for Child Study*
B.A., Oberlin College, 1941; M.A., University of Chicago, 1946; Ph.D., 1949;
Ed.D., New York University, 1956.
- PICKETT, WILDA, *Associate Professor in Education*
B.S., Missouri State College, 1932; M.S., Teachers College, Columbia, 1934;
Ed.D., 1955.
- PILEGGE, JOSEPH C., *Lecturer in Government and Politics*
B.S., West Virginia University, 1955; M.A., Marshall University, 1961.

FACULTY

- PLISCHKE, ELMER, *Professor and Head of the Department of Government and Politics*
 Ph.B., Marquette University, 1937; M.A., American University, 1938; Ph.D., Clark University, 1943.
- POFFENBERGER, PAUL R., *Assistant Dean-Instruction and Professor of Agricultural Economics*
 B.S., University of Maryland, 1935; M.S., 1937; Ph.D., American University, 1953.
- PORTZ, JOHN, *Assistant Professor of English*
 B.S., Duke University, 1937; M.A., Harvard University, 1941; Ph.D., 1958.
- PRESCOTT, DANIEL A., *Professor of Education and Director Emeritus, Institute for Child Study*
 B.S., Tufts College, 1920; M.Ed., Harvard University, 1922; Ed.D., 1923.
- PUGLIESE, RUDOLPH E., *Associate Professor of Speech and Dramatic Art*
 B.A., Miami University, 1947; M.A., Catholic University, 1949; Ph.D., Ohio State University, 1961.
- PUGSLEY, JAMES HARWOOD, *Assistant Professor of Electrical Engineering*
 A.B., Oberlin College, 1956; M.S., University of Illinois, 1958; Ph.D., 1963.
- RAIA, ANTHONY P., *Assistant Professor of Business Administration*
 B.S., Columbia University, 1956; M.B.A., University of California, Los Angeles, 1960; Ph.D., 1963.
- RAPPELLE, ROBERT D., *Associate Professor of Botany*
 B.S., University of Maryland, 1941; M.S., 1947; Ph.D., 1949.
- RATHS, JAMES D., *Associate Professor and Assistant Director, Bureau of Educational Research and Field Services*
 B.S., Yale College, 1954; M.A., 1955; Ph.D., New York University, 1960.
- RAY, PHILLIP B., *Assistant Professor of Education and Counselor*
 B.A., Antioch College, 1950; M.S., University of Pennsylvania, 1955; Ph.D., University of Minnesota, 1962.
- REMINGTON, AUDRAY W., *Instructor in Textiles and Clothing*
 B.S., State University Teachers College, Oneonta, New York; M.S., Michigan State University.
- RENZ, PAUL, *Assistant Professor in Education*
 B.S., Syracuse University, 1951; M.S., 1952; Ph.D., University of Illinois, 1962.
- RHOADS, DAVID J., *Assistant Professor of Education*
 B.S., Temple University, 1954; M.A., 1958; Ph.D., University of Maryland, 1963.
- RICHESON, ALLIE W., *Professor of Mathematics*
 B.S., University of Richmond, 1918; M.A., Johns Hopkins University, 1925; Ph.D., Johns Hopkins University, 1928.

FACULTY

RISINGER, ROBERT G., *Professor and Head, Department of Secondary Education*

B.S., Ball State Teachers College, 1940; M.A., University of Chicago, 1947; Ed.D., University of Colorado, 1955.

ROBERTSON, J. RIGHTON, JR., *Assistant Professor of History*

B.A., University of the South, 1954; M.A., Emory University, 1960; Ph.D., 1962.

ROPER, JAMES B., *Assistant Professor of Applied Design*

B.S., East Carolina College, 1961; M.A., 1963.

ROVNER, PHILIP, *Associate Professor of Foreign Languages*

B.A., The George Washington University, 1948; M.A., 1949; Ph.D., University of Maryland, 1958.

RUMBAUGH, JEFFREY HAMILTON, *Instructor in Electrical Engineering*

B.S., University of Maryland, 1957.

RYANS, JOHN K., JR., *Assistant Professor of Marketing*

A.B., University of Kentucky, 1954; M.S., University of Tennessee, 1958; D.B.A., Indiana University, 1965.

SALGADO, MARIA A., *Instructor of Foreign Languages*

B.A., Florida State University, 1958; M.A., University of North Carolina, 1960.

SCHINDLER, ALVIN W., *Professor of Education*

B.A., Iowa State Teachers College, 1927; M.A., University of Iowa, 1929; Ph.D., 1934.

SCHLARETZKI, W. E., *Professor and Head of Philosophy*

B.A., Monmouth College, 1941; M. A., University of Illinois, 1942; Ph.D., Cornell University, 1948.

SCHMIEDER, ALLEN A., *Assistant Professor*

B.S., Edinboro State College, 1955; M.A., Ohio State University, 1956; Ph.D., Ohio State University, 1963.

SCHRAMM, CARL, *Instructor in Industrial Education*

B.S., University of Maryland, 1956.

SEIDMAN, ERIC, *Assistant Professor of Education*

B.S., New York University, 1947; M.A., New York University, 1948.

SHAFFNER, CLYNE S., *Professor and Head of Poultry Science*

B.S., Michigan State College, 1938; M.S., 1940; Ph.D., Purdue University, 1947.

SHEPHERD, JULIUS C., *Assistant Professor of Mathematics*

B.A., East Carolina College, 1944; M.A., East Carolina College, 1947.

SIMMS, BETTY HOWALD, *Assistant Professor of Education*

B.A., Harris Teachers College, 1947; M.A., University of Michigan, 1955; Ed.D., University of Maryland, 1962.

SOLES, JAMES R., *Lecturer in Government and Politics*

B.S., Florida State University, 1957; M.S., 1961.

- SONNTAG, GUENTER, *Instructor of Foreign Languages*
B.A., University of Maryland, 1960; M.A., 1962.
- SPENCER, MABEL S., *Associate Professor of Home Economics Education*
B.S., West Virginia University, 1925; M.S., 1946; Ed.D., American University, 1959.
- STANT, MAGRARET A., *Assistant Professor of Education*
B.S., University of Maryland, 1952; Ed.M., 1955; A.P.C., George Washington University, 1959.
- STARK, FRANCIS C., *Professor and Head of Horticulture*
B.S., Oklahoma A. & M., 1940; M.S., University of Maryland, 1941; Ph.D., 1948.
- STEELY, LEWIS R., *Assistant Instructor of Mathematics*
B.S., Wilson Teachers College, 1937; M.A., Catholic University, 1945.
- STEINMEYER, REUBEN G., *Professor of Government and Politics*
A.B., American University, 1929; Ph.D., 1935.
- STRAUSRAUGH, WARREN L., *Professor and Head of Speech and Dramatic Art*
B.S., Wooster College, 1932; M.A., State University of Iowa, 1935.
- STUNKARD, CLAYTON L., *Associate Professor of Education*
B.S., University of Minnesota, 1948; M.S., 1951; Ph.D., 1959.
- STUNTZ, CALVIN F., *Associate Professor of Chemistry*
B.A., University of Buffalo, 1939; Ph.D., 1947.
- SULLIVAN, DOROTHY D., *Instructor in Education and Acting Director of the Reading Clinic*
A.B., University of Maryland, 1945; Ed.M., 1960.
- SWEENEY, CHARLES T., *Professor of Accounting*
B.S., Cornell University, 1921; M.B.A., University of Michigan, 1928; C.P.A., Iowa, 1934; Ohio, 1936.
- TAFF, CHARLES A., *Professor and Head of Department of Business Administration*
B.S.C., State University of Iowa, 1937; M.A., 1941; Ph.D., University of Maryland, 1952.
- TERCHEK, RONALD J., *Lecturer in Government and Politics*
B.A., University of Chicago, 1958; M.A., 1960.
- TIERNEY, WILLIAM F., *Associate Professor of Industrial Education*
B.S., Teachers College of Connecticut, 1941; M.A., Ohio State University, 1949; Ed.D., University of Maryland, 1952.
- TOMPKINS, HOWARD EDWARD, *Professor of Electrical Engineering and Head of the Department*
B.A., Swarthmore College, 1942; M.S., University of Pennsylvania, 1947; Ph.D., 1957.

FACULTY

- TOMPKINS, THERON A., *Associate Professor of Physical Education*
B.S., Eastern Michigan College of Education, 1926; M.A., University of Michigan, 1939.
- TOSI, HENRY L., *Assistant Professor*
B.S.C., Ohio State University, 1958; M.B.A., 1962; Ph.D., 1964.
- TULLEY, PATRICIA, *Assistant Professor of Mathematics*
A.B., Vassar College, 1955; M.S., University of Wisconsin, 1958; Ph.D., University of Wisconsin, 1962.
- ULRY, ORVAL L., *Professor of Education, Department of Secondary Education*
B.S., Ohio State University, 1938; M.A., 1944; Ph.D., 1953.
- UPGREN, ARTHUR R., *Visiting Lecturer in Physics and Astronomy*
B.A., University of Minnesota, 1955; M.S., University of Michigan, 1958; Ph.D., Case Institute of Technology, 1961.
- VAN ITEN, R. J., *Assistant Professor of Philosophy*
B.A., University of Dudenque, 1957; M.A., State University of Iowa, 1961; Ph.D., 1964.
- VAN NESS, JAMES S., *Instructor in History*
B.A., University of Maryland, 1954; M.A., 1962.
- VAN ROYEN, WILLIAM, *Professor*
M.A., Rijksuniversiteit Utrecht, 1925; Ph.D., Clark University, 1928.
- VAN ZWOLL, JAMES A., *Professor of School Administration*
B.A., Calvin College, Grand Rapids, Michigan, 1933; M.A., University of Michigan, 1937; Ph.D., 1942.
- WAETJEN, WALTER B., *Professor of Education, Director, Bureau of Educational Research and Field Services; General Director, Interprofessional Research Commission on Pupil Personnel Services*
B.S., State Teachers College, Millersville, Pa., 1942; M.S., University of Pennsylvania, 1947; Ed.D., University of Maryland, 1951.
- WALDROP, ROBERT S., *Professor of Psychology*
B.A., University of Oklahoma, 1934; Ph.D., University of Michigan, 1948.
- WARD, KATHRYN M. PAINTER, *Associate Professor of English*
B.A., The George Washington University, 1935; M.A., 1936; Ph.D., 1947.
- WEAVER, CARL H., *Associate Professor of Speech and Dramatic Art*
B.A., Bluffton College, 1936; M.A., Ohio State University, 1950; Ph.D., 1957.
- WEAVER, V. PHILLIPS, *Assistant Professor of Education*
A.B., William & Mary, 1951; M.Ed., Pennsylvania State University, 1956; Ed.D., 1962.

WEINSTEIN, ALLEN, *Lecturer in History*

B.A., The City College of New York, 1960; M.A., Yale University, 1962.

WIGGIN, GLADYS A., *Professor and Director of Graduate Studies in Education*

B.S., University of Minnesota, 1929; M.A., 1939; Ph.D., University of Maryland, 1947.

WILCOX, FRANK H., *Associate Professor of Poultry Science*

B.S., University of Connecticut, 1951; M.S., Cornell University, 1953; Ph.D., 1955.

WILLIAMS, DAVID L., *Assistant Professor of Education*

B.S., Bradley University, 1952; Ed.M., University of Illinois, 1956; Ed.D., to be awarded in 1965.

WIRTZ, MARVIN, *Lecturer in Special Education*

B.S., Milwaukee State Teachers College, 1942; M.Ed., 1951; Ed.D., University of Illinois, 1954.

WOLFE, G. JOSEPH, *Assistant Professor of Speech and Dramatic Art*

B.S., Eastern Illinois University, 1955; M.A. State University of Iowa, 1959; Ph.D., 1964.

ZEEVELD, W. GORDON, *Professor of English*

B.A., University of Rochester, 1924; M.A., The Johns Hopkins University, 1929; Ph.D., 1936.

ZIMRING, BOB, *Lecturer in Government and Politics*

A.B., University of Illinois, 1960; M.S., University of Wisconsin, 1963.

ZIMMERMAN, MELVIN, *Assistant Professor of Foreign Languages*

B.S., City College of New York, 1950; M.F.S., University of Maryland, 1958; Ph.D., University of Wisconsin, 1964.

ZINOVIEFF, ANDRE, *Instructor of Foreign Languages*

B.S., Russian Imperial Military Academy, 1914.

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From "The State and the University"
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